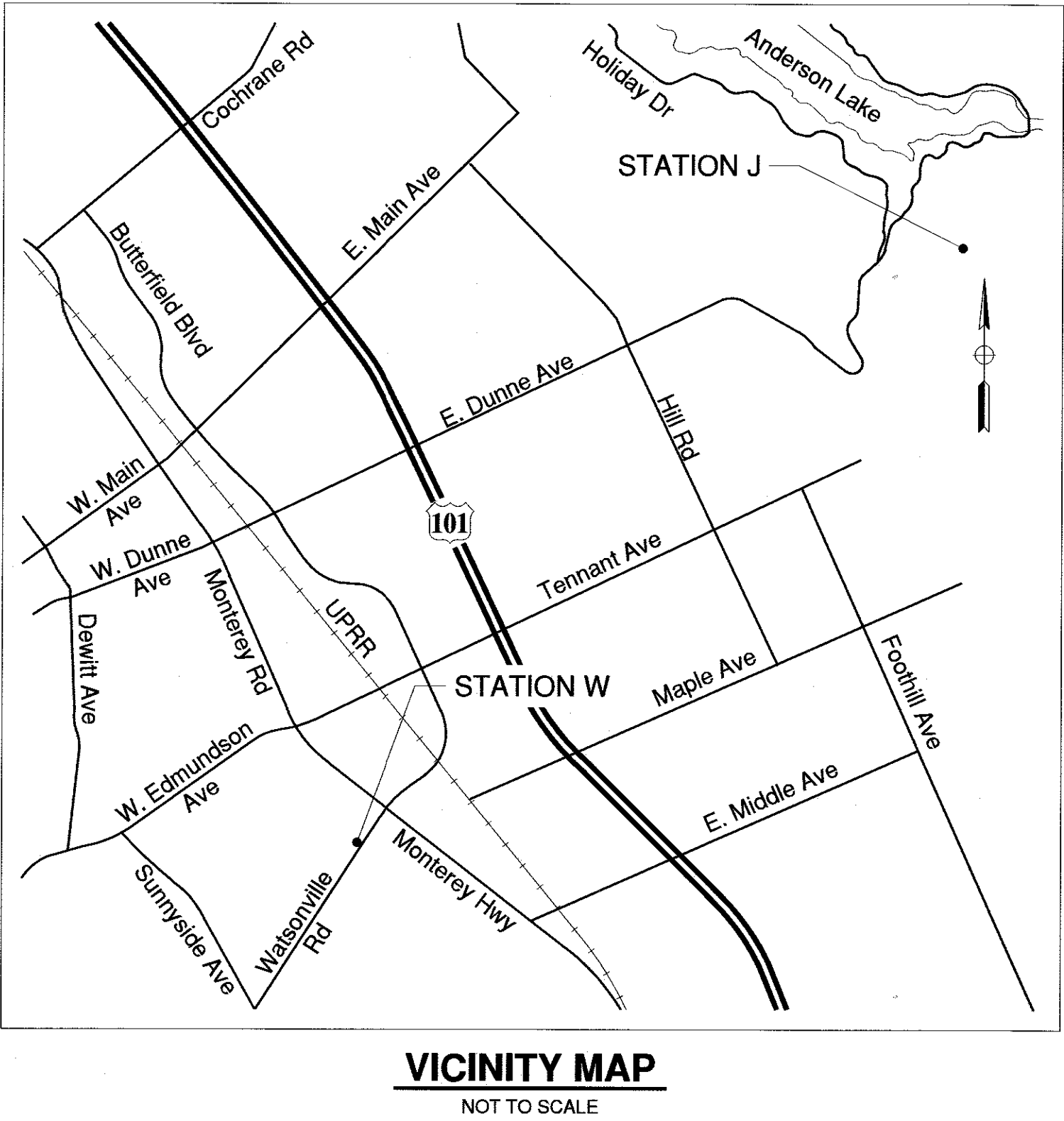


IMPROVEMENT PLANS FOR  
SANITARY SEWER LIFT STATIONS J & W REHABILITATION

Station J: 16035 Jackson Oaks Drive  
Station W: 15505 Watsonville Road

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STATION J SITE CONTROL

STATION J SITE CONTROL IS BASED ON A DECEMBER 2015 TOPOGRAPHIC SURVEY BY MH ENGINEERING CO. COORDINATES SHOWN ARE BASED ON A LOCAL COORDINATE SYSTEM ESTABLISHED BY THE SURVEY.

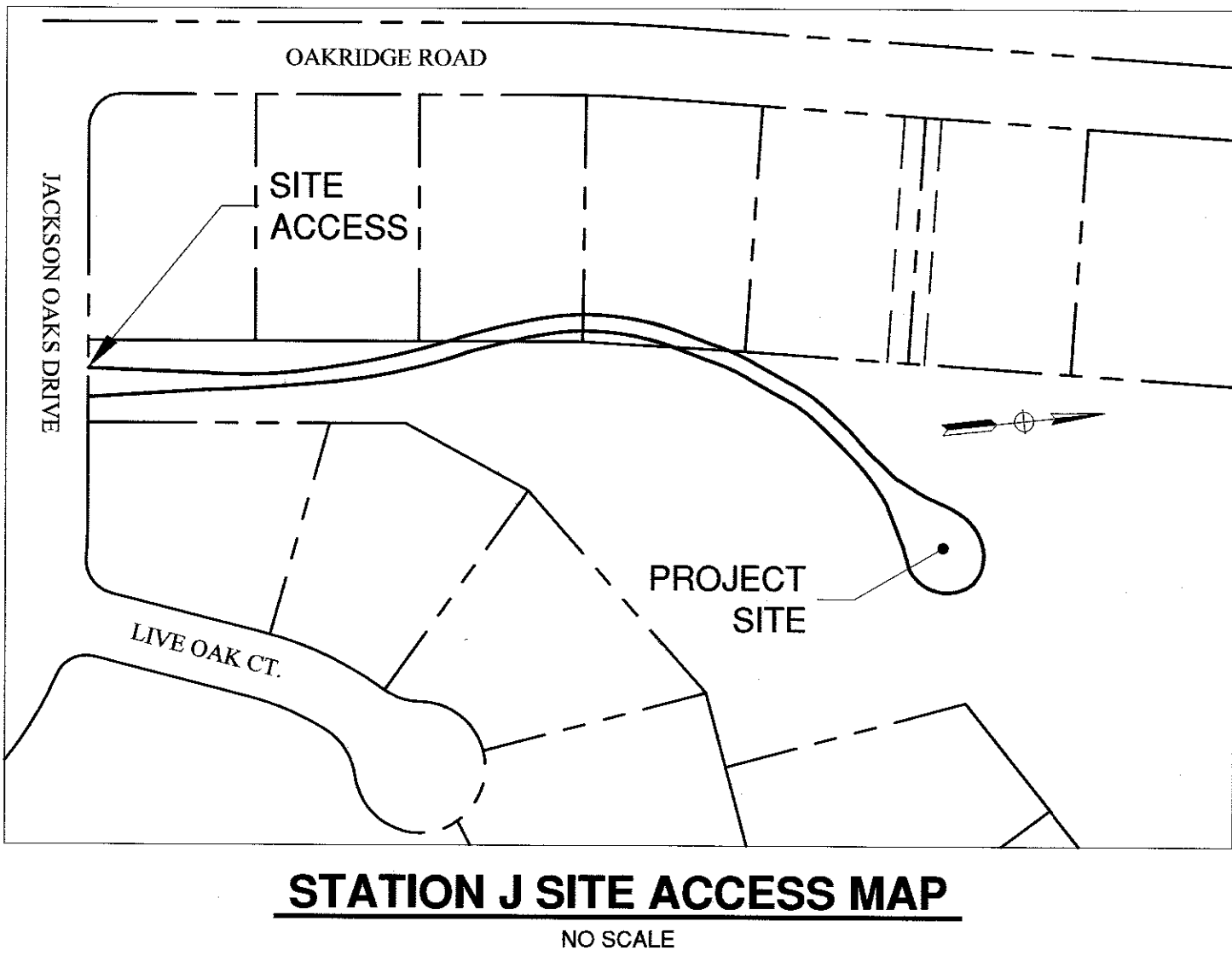
**BENCHMARK**  
THE SITE BENCHMARK ELEVATION FOR STATION J IS A POINT ON THE NORTHERN MOST CORNER OF THE EXISTING STORM DRAIN INLET RIM.

ELEVATION = 999.35 (N 5533.51, E 5373.52)

**BASIS OF BEARING**  
THE BASIS OF BEARING FOR STATION J IS A LINE WITH A BEARING OF N 6° 7' 40" E WITH A LENGTH OF 325 FEET FROM POINT A TO POINT B.

POINT A IS A "BPM" AT THE INTERSECTION OF THE CENTERLINE OF OAKRIDGE ROAD WITH THE CENTERLINE OF JACKSON OAKS DRIVE WITH COORDINATES OF N 5000.00, E 5000.00.

POINT B IS A POINT ALONG THE CENTERLINE OF OAKRIDGE ROAD WITH COORDINATES OF N 5323.14, E 5034.69.



PREPARED BY:

Logan Fox  
LOGAN N. FOX  
SCHAAF & WHEELER



DATE: 2/16/18

NOTE:  
CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

GENERAL

1. CONTRACTOR SHALL NOTIFY THE UNDERGROUND SERVICE ALERT @ 1-800-642-2444 48 HOURS PRIOR TO COMMENCEMENT OF EXCAVATION.
2. LOCATIONS AND DEPTHS OF EXISTING UNDERGROUND PIPELINES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR EXACT FIELD LOCATIONS. A MINIMUM OF 6 INCHES VERTICAL CLEARANCE BETWEEN PIPES CROSSING UNDERGROUND SHALL BE MAINTAINED WHETHER SHOWN ON DRAWINGS OR NOT. ANY CONFLICTS IN PIPING SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. PIPELINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS SHOWN ON PLANS. UNLESS OTHERWISE NOTED, ALL PIPE ELEVATIONS SHOWN REFER TO THE INVERT.
4. ALL SANITARY SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF MORGAN HILL STANDARD DETAILS. MATERIALS SHALL CONFORM TO THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM), AND AMERICAN WATER WORKS ASSOCIATION (AWWA), EXCEPT AS MODIFIED HEREIN.
5. SANITARY SEWER GRAVITY LINES SHALL BE PVC PIPE ASTM 3034-SDR26. SANITARY FORCE MAIN SHALL BE PVC PIPE AWWA C900.
6. ALL DIRECTIONS, EXCEPT FOR THE CONTROL LINE, ARE GIVEN IN AZIMUTHS WHICH ARE MEASURED IN A CLOCKWISE DIRECTION FROM 0° NORTH. ROAD CENTERLINES ARE GIVEN AS BEARINGS.
7. CONSTRUCTION SHALL BE IN CONFORMANCE W/ MANUFACTURERS' RECOMMENDATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AS-BUILT DRAWINGS. DRAWINGS SHALL RECORD THE APPROVED CHANGES MADE IN ACTUAL CONSTRUCTION FROM CONTRACT PLANS.

CONSTRUCTION WITHIN CITY RIGHT-OF-WAY

1. NO PERSON OR CONTRACTOR SHALL PERFORM ANY IMPROVEMENT OR ENCROACHMENT WORK OF ANY KIND IN ANY PUBLIC RIGHT-OF-WAY WITHIN THE CITY WITHOUT FIRST HAVING OBTAINED AN ENCROACHMENT PERMIT FROM THE PUBLIC WORKS DEPARTMENT.
2. CONTRACTOR SHALL ARRANGE FOR A PRE-CONSTRUCTION MEETING WITH THE CITY ENGINEER (MUNICIPAL CODE 17.32.250b) PRIOR TO COMMENCING ANY CONSTRUCTION. AN ENCROACHMENT PERMIT SHALL BE OBTAINED FROM THE PUBLIC WORKS DEPARTMENT UPON COMPLETION OF SAID MEETING AND PRIOR TO CONSTRUCTION OF ANY IMPROVEMENTS WITHIN AN EXISTING OR OFFERED FOR DEDICATION RIGHT-OF- WAY, PUBLIC UTILITY EASEMENT OR PUBLIC SERVICE EASEMENT.
3. CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF ANY WORK PHASE. AT THAT TIME AN "INSPECTION REQUEST FORM" SHALL BE COMPLETED TO ENSURE PROPER SCHEDULING OF AN INSPECTION WITH THE CITY ENGINEER'S REPRESENTATIVE.
4. CONTRACTOR SHALL NOT DESTROY EXISTING PERMANENT SURVEY MONUMENTS; WHETHER PROPERTY CORNERS OR STREET CENTERLINE MONUMENTS.
5. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE MORGAN HILL STANDARD DETAILS FOR CONSTRUCTION. DEVIATIONS FROM THE STANDARD DETAILS MUST BE APPROVED BY THE CITY ENGINEER.
6. CONTRACTOR SHALL ONLY USE EQUIPMENT PROVIDED WITH A SPARK ARRESTOR DEVICE TO REDUCE A POTENTIAL FIRE HAZARD.
7. CONTRACTOR SHALL PRESERVE ALL SURROUNDING PROPERTY BY CONFINING OPERATIONS TO WITHIN THE "LIMITS OF WORK". CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS FOR ALL ADJOINING RESIDENTS, PLACES OF BUSINESS, AND PROPERTIES AT ALL TIMES AND IN A SAFE MANNER. CONTRACTOR SHALL MAKE PROPER NOTIFICATION AT LEAST 24 HOURS IN ADVANCE OF ANY INTERRUPTION IN ACCESS OR SERVICE TO THE ABOVE PROPERTY OWNERS AS WELL AS TO THE CITY ENGINEER'S REPRESENTATIVE.
8. CONTRACTOR WILL BE ALLOWED TO DRAW WATER FROM THE CITY OF MORGAN HILL WATER DISTRIBUTION SYSTEM ONLY AFTER OBTAINING A HYDRANT METER FROM THE PUBLIC WORKS DEPARTMENT AND AN INSPECTION OF THE WATER TRUCK FOR A PROPER BACKFLOW DEVICE OR "AIR-GAP" FILLING PIPE. CONTRACTOR SHALL KEEP DOWN DUST FROM CONSTRUCTION ACTIVITY TO THE MAXIMUM EXTENT POSSIBLE. CONTRACTOR SHALL CLEAN ALL EXISTING STREETS, CURBS, GUTTERS, AND SIDEWALKS AFFECTED BY THE PROJECT AT THE END OF EACH WORKING DAY. THE WATER SERVICE LOCATED AT THE LIFT STATION M SITE IS AVAILABLE TO THE CONTRACTOR.

MATERIAL STORAGE

9. NO MATERIAL SHALL BE STORED NEAR THE EDGE OF PAVEMENT, TRAVELED WAY, SIDEWALK, DRIVEWAY, OR SHOULDER LINE WHICH MAY CREATE A HAZARD FOR VEHICULAR AND PEDESTRIAN TRAFFIC.

TRAFFIC CONTROL

10. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL TO THE PUBLIC WORKS DEPARTMENT A MINIMUM OF 5 DAYS PRIOR TO ANY WORK WITHIN AN EXISTING PUBLIC STREET. THE PLAN SHALL BE SIGNED BY A LICENSED TRAFFIC ENGINEER WHEN IT INVOLVES AN ARTERIAL STREET. CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF CALTRANS "MANUAL FOR WARNING SIGNS, LIGHTS, AND DEVICES FOR USE IN PERFORMANCE OF WORK UPON HIGHWAYS" WHILE WORKING WITHIN THE PUBLIC RIGHT-OF-WAY. TWO TRAFFIC LANES (10' MIN) SHALL BE OPEN TO VEHICULAR TRAFFIC DURING ALL HOURS, WEEKENDS, AND HOLIDAYS. ONE LANE ONE WAY TRAFFIC, MAY BE UNDER THE CONTROL OF NOT LESS THAN 2 (TWO) COMPETENT FLAGMEN DURING CONSTRUCTION OPERATIONS. STREET CLOSURES AND DETOURS SHALL ONLY TAKE PLACE UPON CITY ENGINEER APPROVAL AND POLICE DEPARTMENT COORDINATION.

TRENCH EXCAVATION

11. CONTRACTOR SHALL EXERCISE DILIGENCE IN REVIEWING AVAILABLE RESOURCES TO FAMILIARIZE THEMSELVES WITH THE SOIL CONDITIONS TO BE ENCOUNTERED IN THE COURSE OF WORK IDENTIFIED IN THESE PLANS. CONTRACTOR SHALL NOT CAUSE DAMAGE TO ADJACENT TREES OR EXISTING STRUCTURES ABOVE OR BELOW GRADE DURING TRENCH EXCAVATION. ALL ROCKS, BOULDERS, AND LARGE STONES ENCOUNTERED SHALL BE REMOVED TO PROVIDE A CLEARANCE OF 6 INCHES AROUND THE PIPE. THE TRENCH BOTTOM SHALL BE REFILLED TO GRADE WITH SAND OR OTHER APPROVED GRANULAR MATERIAL. IF THE BOTTOM OF THE TRENCH IS FOUND TO CONSIST OF WET OR UNSTABLE MATERIAL INCAPABLE OF PROPERLY SUPPORTING THE PIPE, THE MATERIAL SHALL BE REMOVED TO A MINIMUM DEPTH OF 12 INCHES BELOW THE UNSTABLE LAYER FOR THE FULL WIDTH OF THE TRENCH AND REPLACED WITH APPROVED GRANULAR MATERIAL. TRENCH EXCAVATION MATERIAL DEPOSITED ADJACENT TO THE TRENCH SHALL BE PLACED AND LOCATED TO PREVENT SPILLAGE INTO THE OPEN TRENCH.

TRENCH SAFETY

12. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY TRENCH SAFETY MEASURES FOR EXCAVATIONS. ALL TRENCH SAFETY MEASURES SHALL BE IN ACCORDANCE WITH THE LATEST CAL-OSHA GUIDELINES. CONTRACTOR SHALL PROVIDE EVIDENCE OF A CAL-OSHA TRENCHING PERMIT AT THE PRE-CONSTRUCTION MEETING.
13. EXCAVATIONS WITHIN THE PUBLIC TRAVELED WAY SHALL BE BACKFILLED, COMPACTED, AND TEMPORARILY PAVED WITH COLD MIX "CUT BACK" TYPE A.C. TO ALLOW FOR VEHICULAR AND PEDESTRIAN TRAFFIC PRIOR TO 4:00 P.M. THE USE OF TRENCH PLATES IS ALLOWED, PROVIDED THE CONTRACTOR COVERS ALL EDGES OF THE PLATES WITH COLD MIX MATERIAL. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN ON A DAILY BASIS, INCLUDING WEEKENDS, THE AMOUNT OF MATERIAL NECESSARY TO MAINTAIN THE TRENCH SURFACE FLUSH WITH THE EXISTING STREET OR SIDEWALK. IN ADDITION, THE CONTRACTOR SHALL RESPOND TO AND CORRECT SHIFTING TRENCH PLATES REGARDLESS OF THE TIME OF DAY. IF CONTRACTOR FAILS TO CORRECT SINKING BACKFILL MATERIAL OR SHIFTING TRENCH PLATES IN A TIMELY MANNER, CITY SHALL RESERVE THE RIGHT TO CORRECT THE PROBLEM AND BACK CHARGE THE CONTRACTOR.

JOINING EXISTING PAVEMENT

14. EXISTING PAVEMENT WHICH IS TO BE JOINED BY NEW PAVEMENT SHALL BE SAW CUT VERTICAL TO PROVIDE STRAIGHT, TRUE, AND NEAT JOINTS. OVERLAPPING OF EXISTING PAVEMENT WITHOUT SAW CUTTING OR GRINDING SHALL NOT BE PERMITTED. THE VERTICAL EDGES SHALL BE TACKED PRIOR TO PAVING. TERMINALS OF ALL SURFACING INDICATED ON THE PLANS SHALL JOIN ANY EXISTING SURFACE IN A SMOOTH BUTT JOINT. CONFORM PAVING BY METHOD OF ABRASIVE GRINDING WILL BE ALLOWED UPON APPROVAL OF THE CITY ENGINEER.

SANITARY SEWER

15. SANITARY SEWER MANHOLES SHALL CONFORM TO THE CITY'S LATEST STANDARD.
16. PRECAST MANHOLE SECTIONS SHALL BE SEALED AT THE JOINTS WITH RAM-NEK.
17. CONTRACTOR MAY USE PRECAST MANHOLE BASES.

WATER LINES

18. CONTRACTOR SHALL NOT TURN OFF OR ON ANY VALVES BELONGING TO THE CITY'S WATER SYSTEM. ONLY DEPARTMENT OF PUBLIC WORKS PERSONNEL SHALL OPEN THE NECESSARY VALVES TO CONNECT NEW LINES. FAILURE TO FOLLOW THIS REQUIREMENT SHALL BE CONSIDERED AN "UNLAWFUL CONNECTION" AND MAY RESULT IN ISSUING OF A CITATION AND FINES AS SPECIFIED IN SECTION 13.04 OF THE MORGAN HILL MUNICIPAL CODE.

STORM DRAINS

19. STORM DRAINS SHALL BE HDPE PIPE CONFORMING TO AASHTO M294 TYPE D OR TYPE S.

BACKFILL & COMPACTION

20. JETTING AND/OR FLOODING OF TRENCH BACKFILL MATERIAL WILL BE PERMITTED ONLY IF APPROVED BY THE SOILS ENGINEER AND CITY ENGINEER.
21. ANY EXCESS EXCAVATION MATERIAL SHALL BE REMOVED FROM PROJECT AREA AND DISPOSED.
22. THE MINIMUM RELATIVE COMPACTION FOR TRENCH BACKFILL, SUBGRADE AND BASE MATERIAL SHALL BE 95 % THROUGHOUT THE PROJECT APPROVED BY THE CITY ENGINEER, IN ACCORDANCE W/ CITY OF MORGAN HILL STANDARDS.
23. ANY AGGREGATE BASE THAT BECOMES CONTAMINATED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED BASE.

STORMWATER MANAGEMENT EXEMPTION

24. IN ACCORDANCE WITH PROVISION E.12.k, THE CENTRAL COAST POST-CONSTRUCTION REQUIREMENTS, OF THE PHASE II PERMIT AND THE REGIONAL WATER QUALITY CONTROL BOARD REGION 3'S RESOLUTION R3-2013-0032, THIS PROJECT IS EXEMPT FROM POST-CONSTRUCTION PERFORMANCE REQUIREMENTS.

NEW/REPLACEMENT IMPERVIOUS QUANTITY (SF)	
LIFT STATION J	1,380
LIFT STATION W	120

LEGEND

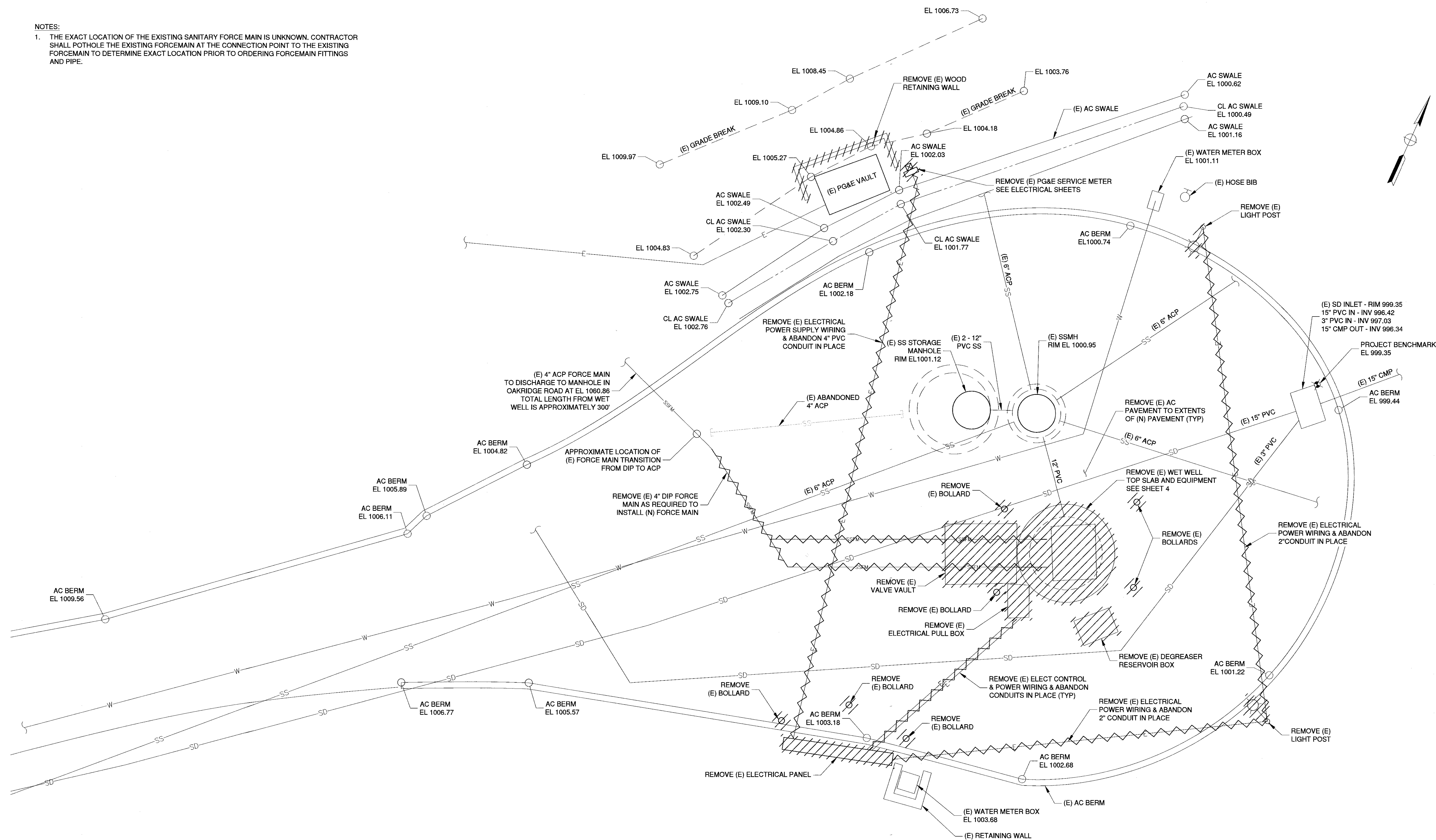
PROPOSED	EXISTING	DESCRIPTION
		SANITARY SEWER
		SANITARY SEWER FORCE MAIN
		STORM DRAIN
		WATER MAIN
		ELECTRIC
		FENCE
		FENCE
		EDGE OF PAVEMENT
		REMOVE OR ABANDON
		RIGHT-OF-WAY
		CENTERLINE
		EASEMENT
		GRADE BREAK
		CENTERLINE
		SLOPE

ABBREVIATIONS

AB	AGGREGATE BASE	MIN	MINIMUM
AC	ASPHALTIC CONCRETE	MJ	MECHANICAL JOINT
ACP	ASBESTOS CEMENT PIPE	N	NORTHING
CATV	CABLE TELEVISION	(N)	NEW
CL	CENTER LINE	N.T.S.	NOT TO SCALE
CLR	CLEAR	OC	ON CENTER
CMP	CORRUGATED METAL PIPE	PCC	PORTLAND CEMENT CONCRETE
DIP	DUCTILE IRON PIPE	PE	PLAIN END
D/S	DOWNSTREAM	PUE	PUBLIC UTILITY EASEMENT
E	EASTING, ELECTRIC	PVC	POLYVINYL CHLORIDE
(E)	EXISTING	REQ'D	REQUIRED
EL	ELEVATION	RT	RIGHT
ELL	ELBOW	SF	SQUARE FEET
EP	EDGE OF PAVEMENT	SS	SANITARY SEWER, STAINLESS STEEL
EQ	EQUAL	SSCO	SANITARY SEWER CLEANOUT
FG	FINISH GRADE	SSFM	SANITARY SEWER FORCE MAIN
FL	FLANGE	SSMH	SANITARY SEWER MANHOLE
FM	FORCEMAIN	STA	STATION
G	GAS	STL	STEEL
HDPE	HIGH DENSITY POLYETHYLENE	SD	STORM DRAIN
INV	INVERT	TC	TOP OF CURB
LF	LINEAR FEET	TYP	TYPICAL
LT	LEFT	VCP	VITRIFIED CLAY PIPE
MAX	MAXIMUM	W	WATER
MH	MANHOLE	WM	WATER METER



				WORK ACCEPTED:	INSPECTOR:	DRAWN: LNF	DESIGN: PCJ	HDR: AS SHOWN	<b>City of Morgan Hill</b> Public Works Department 100 Edes Ct. Morgan Hill, CA 95037 (408) 778-6480, Fax (408) 779-7236	<b>Schaaf &amp; Wheeler</b> CONSULTING CIVIL ENGINEERS 1171 HOMESTEAD ROAD, STE 255 SANTA CLARA, CA 95050 (408) 246-4848		NOTES & ABBREVIATIONS		FILE NUMBER: -
				AS-BUILT CORRECTIONS		VER: AS SHOWN	PRINT DATE: 2/16/2018							
						JOB NUMBER: MHIL.21.15	SANITARY SEWER LIFT STATIONS J & W REHABILITATION	SHEET NUMBER: 2 of 25						
NO.	DESCRIPTION	DATE	BY	BY:	DATE:	CITYENR 002 SCOTT CREER								
PATH				REVISIONS										

NOTES:  
1. THE EXACT LOCATION OF THE EXISTING SANITARY FORCE MAIN IS UNKNOWN. CONTRACTOR SHALL POTHOLE THE EXISTING FORCEMAIN AT THE CONNECTION POINT TO THE EXISTING FORCEMAIN TO DETERMINE EXACT LOCATION PRIOR TO ORDERING FORCEMAIN FITTINGS AND PIPE.



**SITE DEMOLITION PLAN**  
1" = 4'

SCALE: 1 INCH = 4 FEET

				WORK ACCEPTED:		INSPECTOR:		DRAWN: LNF		DESIGN: PCJ		HOR: AS SHOWN	
				AS-BUILT CORRECTIONS				CHECKED: 		VERT: AS SHOWN			
								APPROVED: 		DATE: 2/16/18		JOB NUMBER: MHIL.21.15	
NO.		DESCRIPTION		DATE		BY		BY:		DATE:			
PATH								REVISIONS					
								CITY ENGINEER: SCOTT CREER					

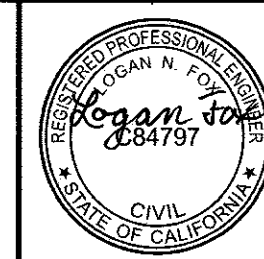


**City of Morgan Hill**  
Public Works Department

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SANTA CLARA, CA 95050  
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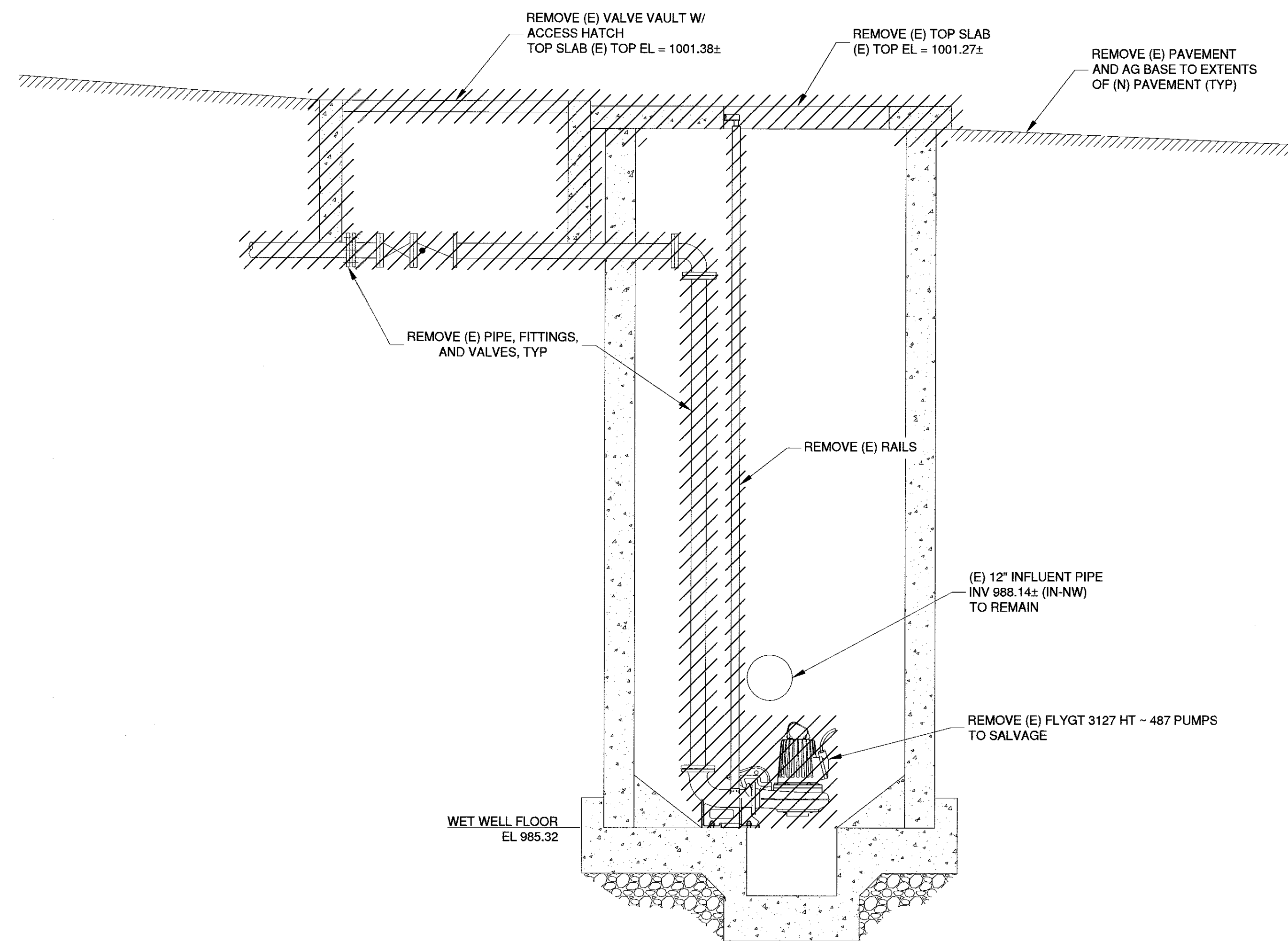
2/16/18



LIFT STATION J  
SITE DEMOLITION PLAN  
SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION

FILE NUMBER:  
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2/16/2018  
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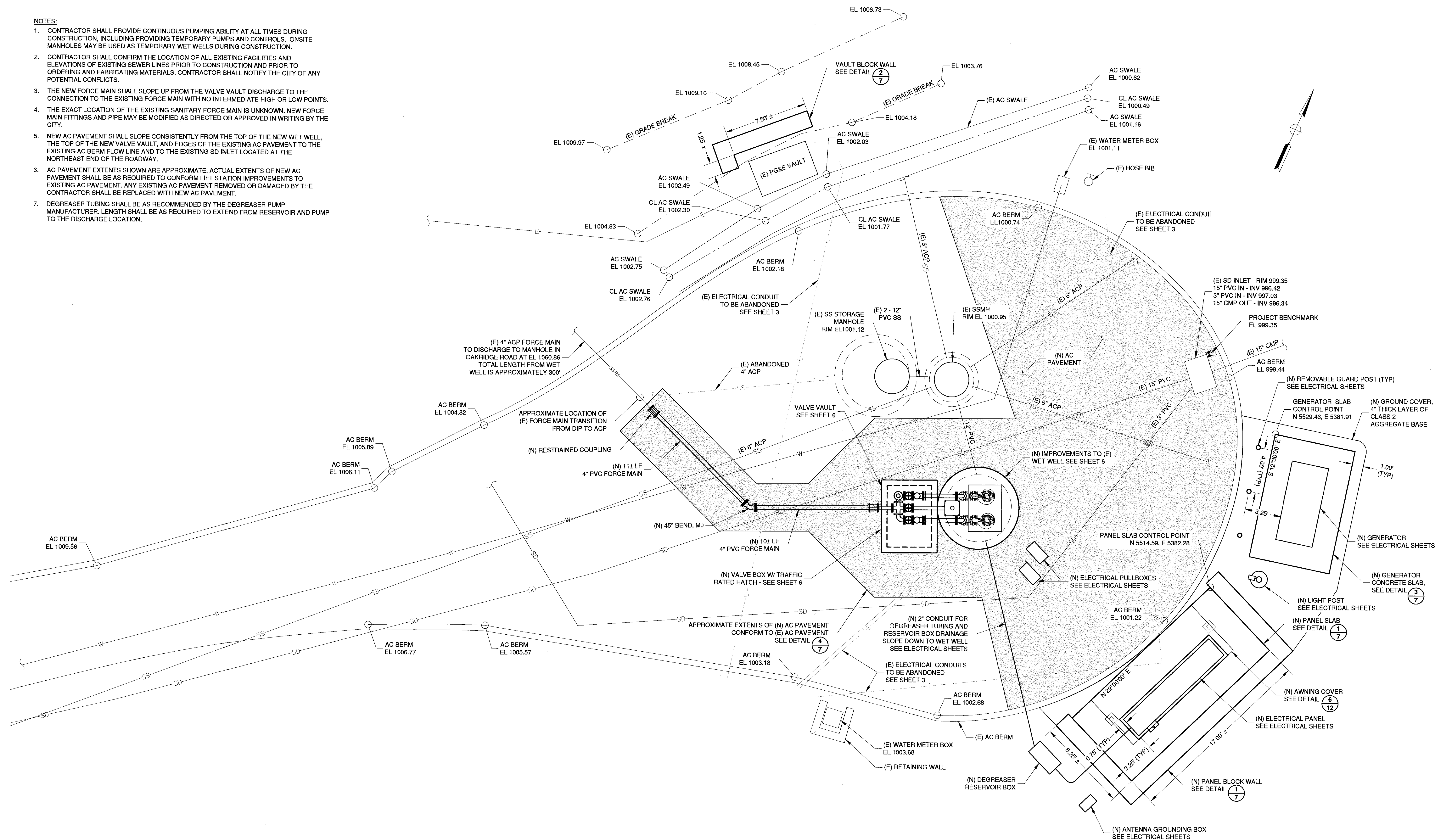
- DEMOLITION NOTES:
1. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE PORTIONS OF THE EXISTING CONCRETE WET WELL STRUCTURE TO REMAIN OR ANY OTHER FACILITIES TO REMAIN.
  2. REMOVE EXISTING CONTROL EQUIPMENT FROM WET WELL.
  3. EXISTING METAL ANCHORED TO THE EXISTING CONCRETE STRUCTURES SHALL BE CUT AND GROUND FLUSH WITH THE CONCRETE SURFACE.
  4. CITY SHALL HAVE THE RIGHT OF FIRST REFUSAL FOR PUMPS, ACCESSORIES, AND ALL OTHER EQUIPMENT TO BE REMOVED UNDER THE WORK OF THIS PROJECT. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING EQUIPMENT TO BE SALVAGED. CONTRACTOR SHALL TRANSPORT ANY SALVAGED EQUIPMENT TO CITY MAINTENANCE YARD LOCATED AT 100 EDES COURT, MORGAN HILL.

# **PUMP STATION DEMOLITION SECTION**

1/2" = 1'-0"

NO.		DESCRIPTION		DATE	BY	WORK ACCEPTED:		INSPECTOR:	DRAWN:	DESIGN:	MOD:	<div> <div> <p><b>City of Morgan Hill</b> Public Works Department</p> <p>100 Edes Ct. Morgan Hill, CA 95037 (408) 778-6480, Fax (408) 779-7236</p></div> <div> <p><b>Schaaf &amp; Wheeler</b> CONSULTING CIVIL ENGINEERS 1171 HOMESTEAD ROAD, STE 255 SANTA CLARA, CA 95050 (408) 246-4848</p> </div> <div> </div> </div>	<div> <p>LIFT STATION J DEMOLITION SECTION</p> <p>SANITARY SEWER LIFT STATIONS J &amp; W REHABILITATION</p> </div>		<div> <p>FILE NUMBER:</p> <p>PRINT DATE: 2/16/2018</p> <p>SHEET NUMBER: 4 OF 25</p> </div>	
PATH						REVISIONS		APPROVED:		DATE:	JOB NUMBER:		<div> <p>2/16/18</p> </div>			
								SCOTT CREER		2/16/18	MHIL.21.15					

- NOTES:
1. CONTRACTOR SHALL PROVIDE CONTINUOUS PUMPING ABILITY AT ALL TIMES DURING CONSTRUCTION, INCLUDING PROVIDING TEMPORARY PUMPS AND CONTROLS. ONSITE MANHOLES MAY BE USED AS TEMPORARY WET WELLS DURING CONSTRUCTION.
  2. CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING FACILITIES AND ELEVATIONS OF EXISTING SEWER LINES PRIOR TO CONSTRUCTION AND PRIOR TO ORDERING AND FABRICATING MATERIALS. CONTRACTOR SHALL NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS.
  3. THE NEW FORCE MAIN SHALL SLOPE UP FROM THE VALVE VAULT DISCHARGE TO THE CONNECTION TO THE EXISTING FORCE MAIN WITH NO INTERMEDIATE HIGH OR LOW POINTS.
  4. THE EXACT LOCATION OF THE EXISTING SANITARY FORCE MAIN IS UNKNOWN. NEW FORCE MAIN FITTINGS AND PIPE MAY BE MODIFIED AS DIRECTED OR APPROVED IN WRITING BY THE CITY.
  5. NEW AC PAVEMENT SHALL SLOPE CONSISTENTLY FROM THE TOP OF THE NEW WET WELL, THE TOP OF THE NEW VALVE VAULT, AND EDGES OF THE EXISTING AC PAVEMENT TO THE EXISTING AC BERM FLOW LINE AND TO THE EXISTING SD INLET LOCATED AT THE NORTHEAST END OF THE ROADWAY.
  6. AC PAVEMENT EXTENTS SHOWN ARE APPROXIMATE. ACTUAL EXTENTS OF NEW AC PAVEMENT SHALL BE AS REQUIRED TO CONFORM LIFT STATION IMPROVEMENTS TO EXISTING AC PAVEMENT. ANY EXISTING AC PAVEMENT REMOVED OR DAMAGED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW AC PAVEMENT.
  7. DEGREASER TUBING SHALL BE AS RECOMMENDED BY THE DEGREASER PUMP MANUFACTURER. LENGTH SHALL BE AS REQUIRED TO EXTEND FROM RESERVOIR AND PUMP TO THE DISCHARGE LOCATION.



**SITE IMPROVEMENT PLAN**  
1" = 4'

SCALE: 1 INCH = 4 FEET

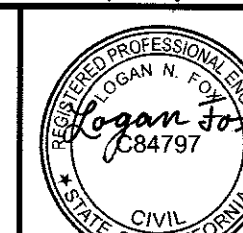
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PATH				REVISIONS			
WORK ACCEPTED:				INSPECTOR:			
AS-BUILT CORRECTIONS				DATE:			
DRAWN: LNF				DESIGN: PCJ			
CHECKED: <i>[Signature]</i>				DATE: 2/16/18			
APPROVED: <i>[Signature]</i>				DATE: 2/16/18			
CITY ENGINEER: SCOTT CREER				JOB NUMBER: MHIL-21.15			



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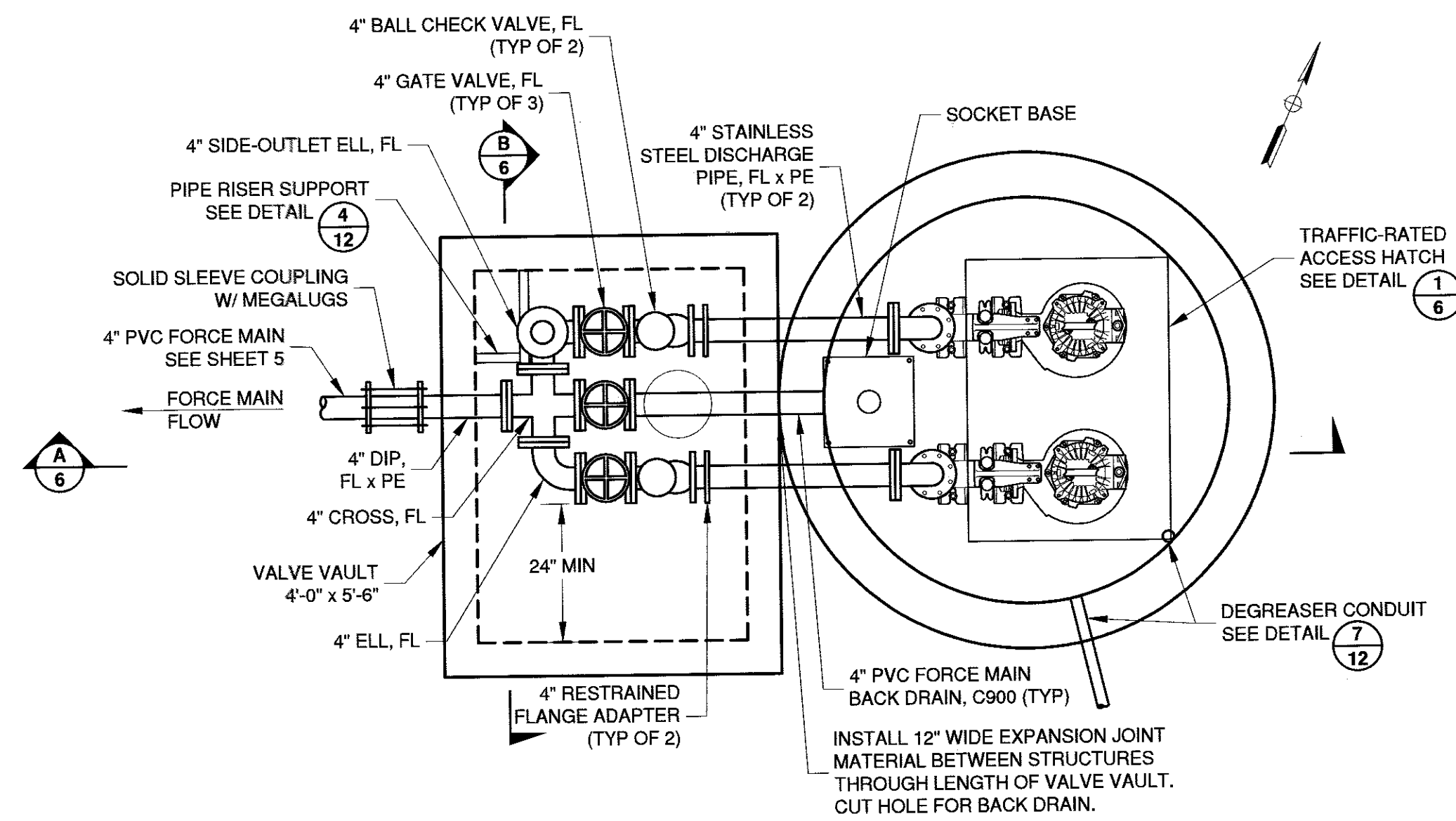
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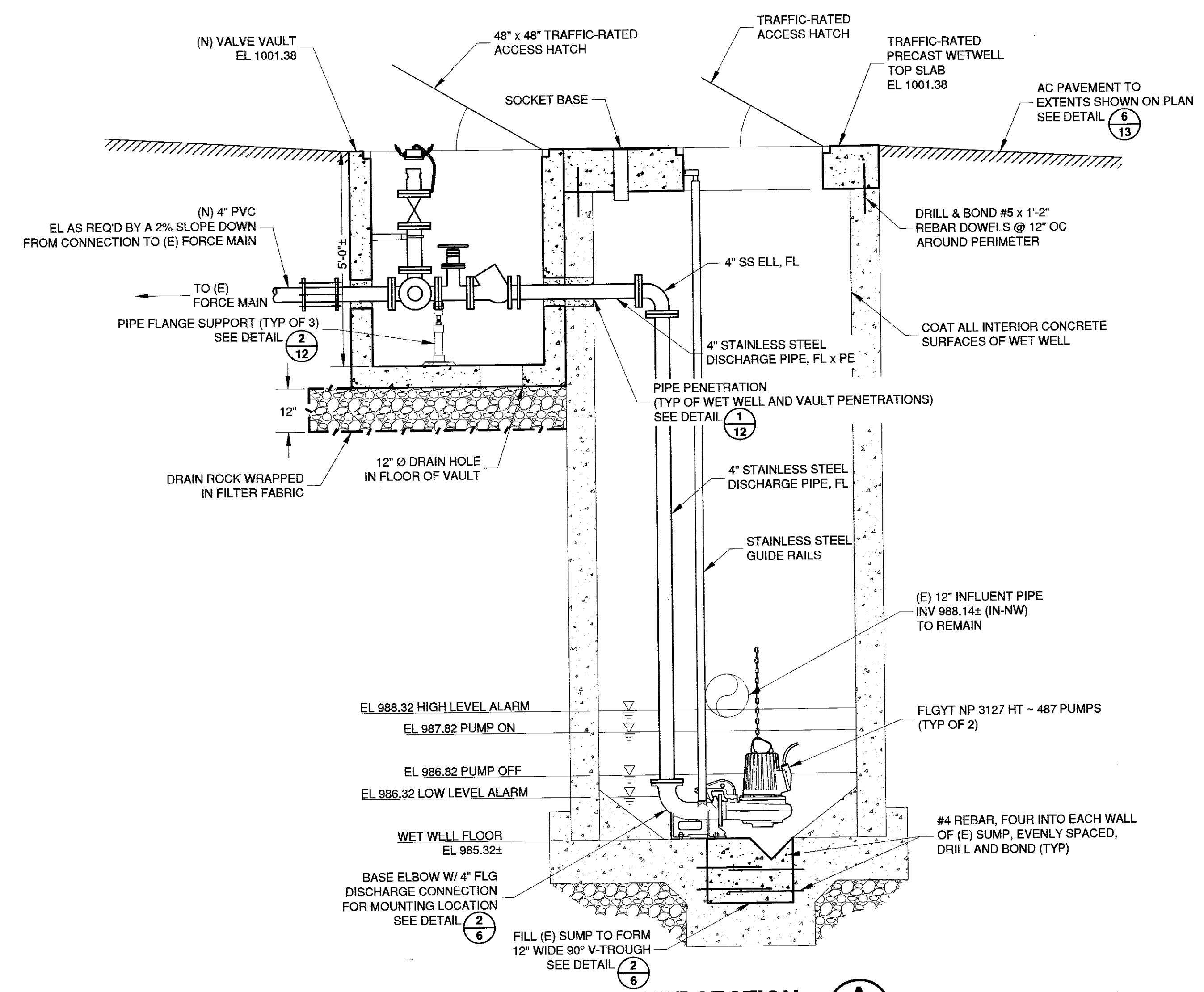
**LIFT STATION J**  
**SITE IMPROVEMENT PLAN**  
**SANITARY SEWER LIFT STATIONS**  
**J & W REHABILITATION**

FILE NUMBER:  
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**5 OF 25**

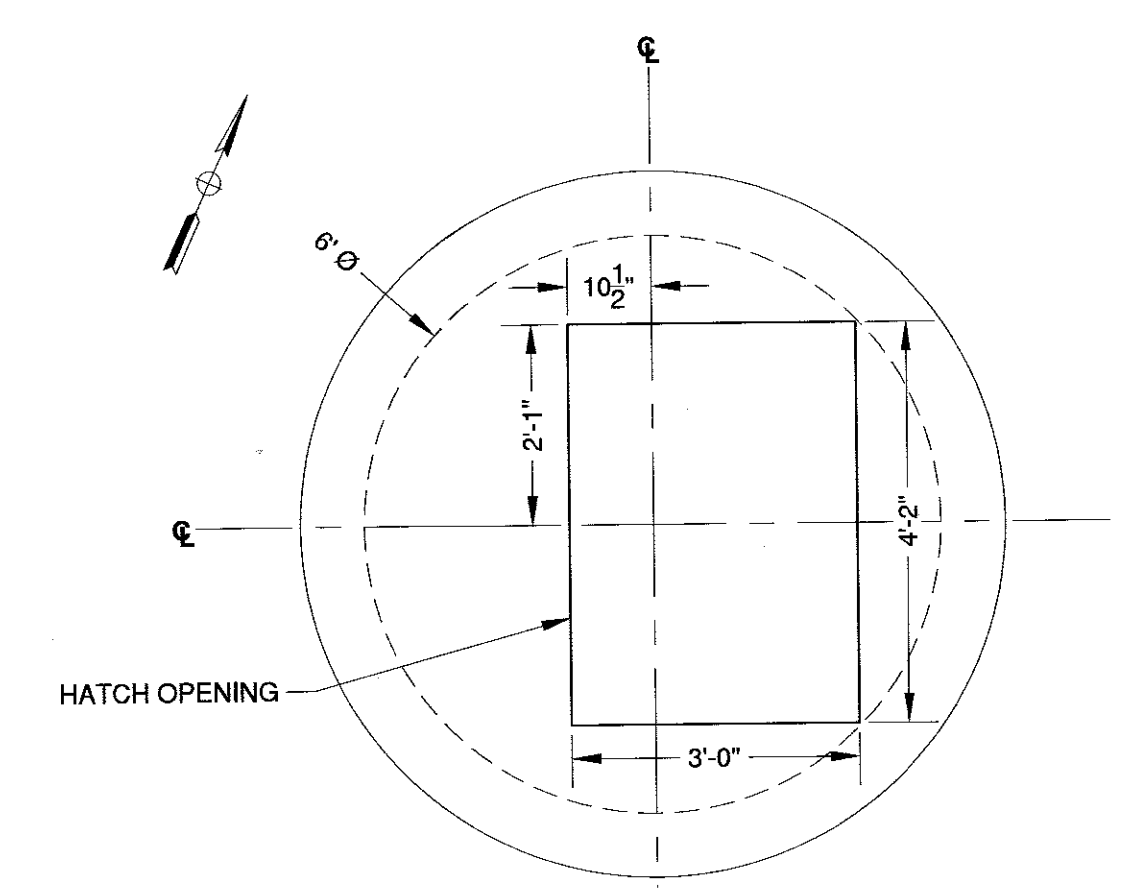




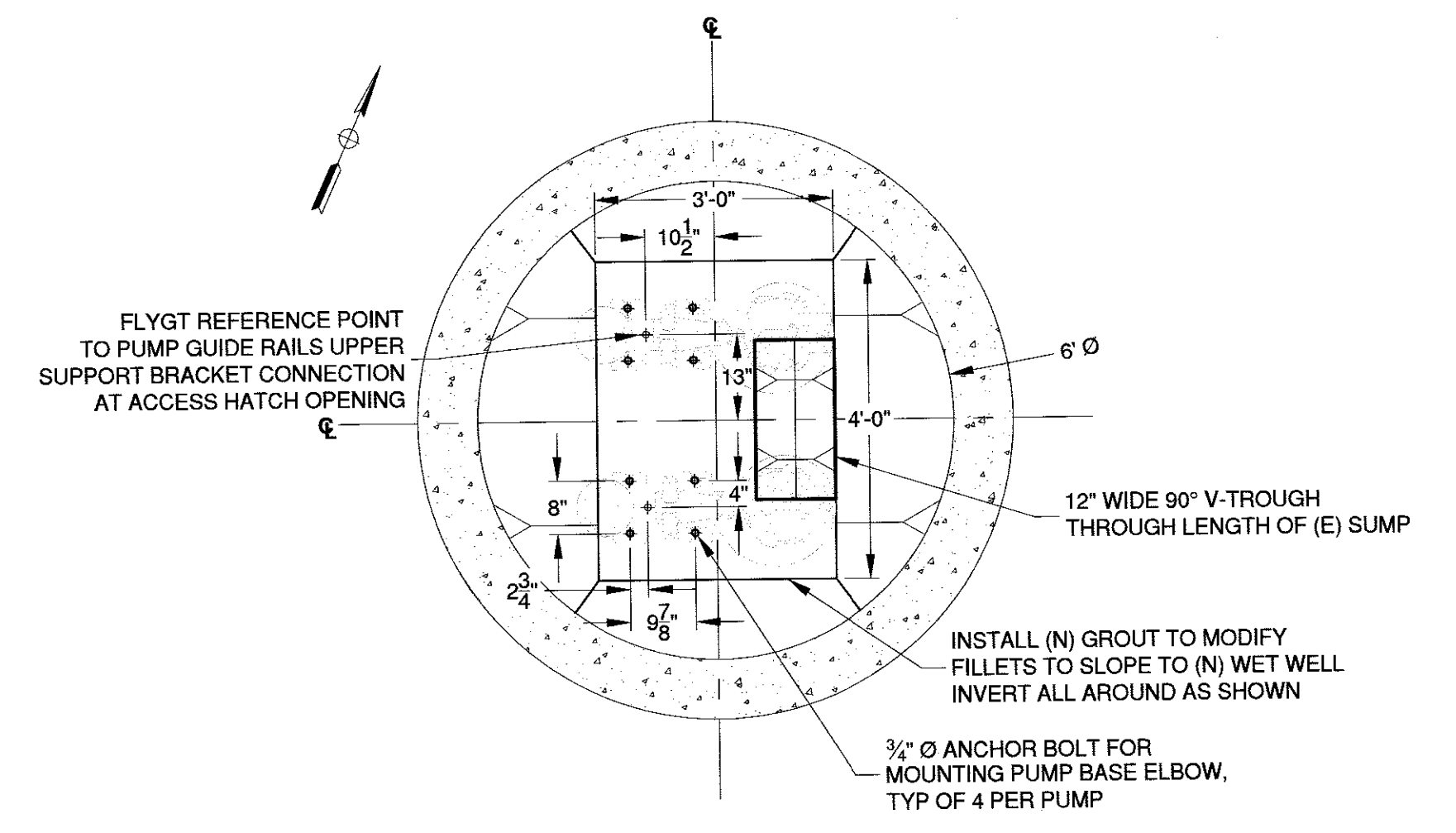
**LIFT STATION IMPROVEMENT PLAN**  
1/2" = 1'-0"



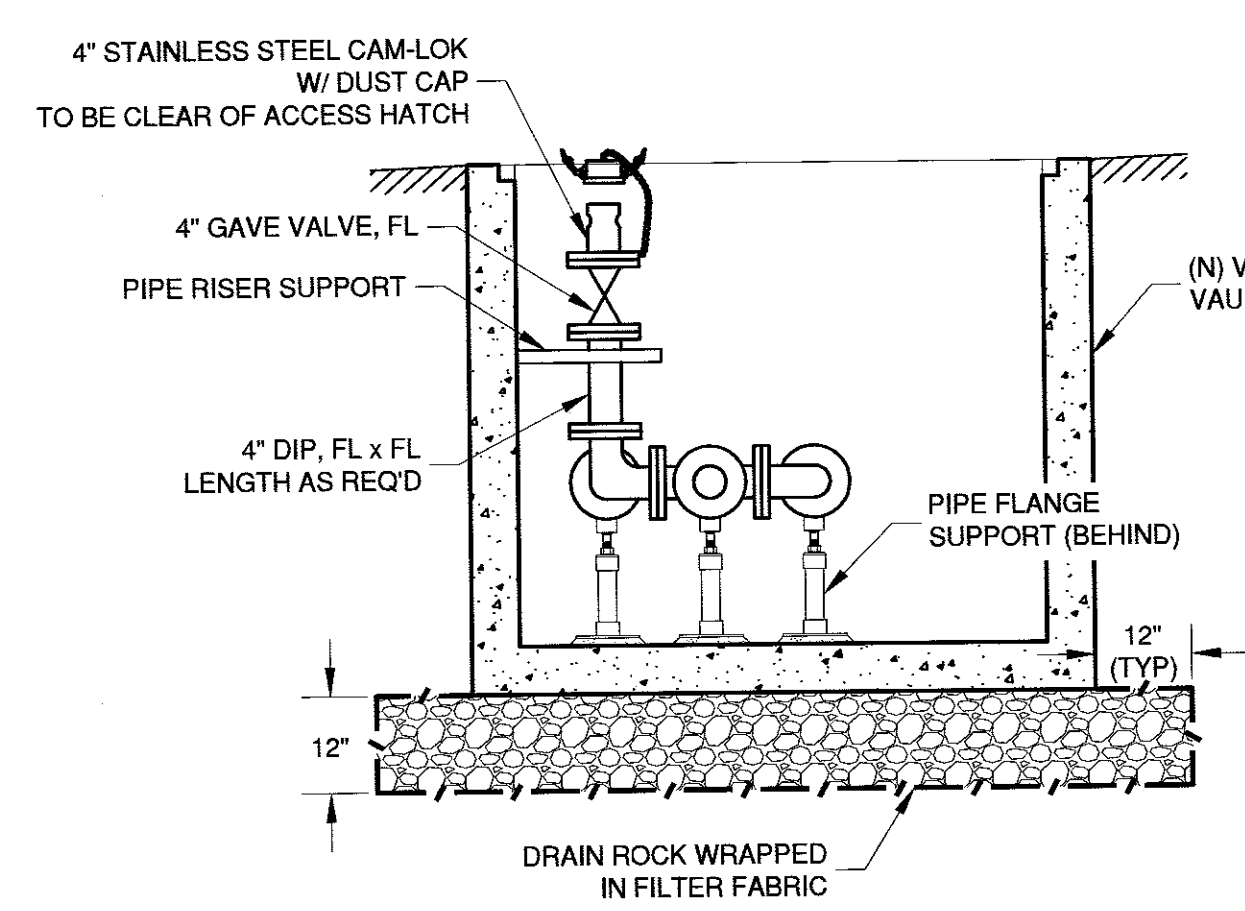
**LIFT STATION IMPROVEMENT SECTION**  
1/2" = 1'-0"



**ACCESS HATCH DETAIL**  
1/2" = 1'-0"





**PUMP MOUNTING DETAIL**  
1/2" = 1'-0"



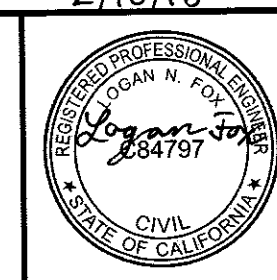
**VALVE VAULT SECTION**  
1/2" = 1'-0"

- NOTES:**
- PUMP CONTROL LEVELS SHOWN ARE BASED ON AN APPROXIMATE WET WELL FLOOR ELEVATION. ACTUAL PUMP CONTROL LEVELS SHALL BE ADJUSTED BASED ON ACTUAL WET WELL FLOOR ELEVATION.
  - ALL MJ FITTINGS AND UNRESTRAINED JOINTS SHALL BE RESTRAINED WITH EBAA MEGALUGS OR APPROVED EQUIVALENT.
  - ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH A POLYETHYLENE ENCASUREMENT PER AWWA STANDARD C105.
  - ALL HARDWARE SHALL BE TYPE 316 STAINLESS STEEL UNLESS OTHERWISE SPECIFIED. ALL NEW DUCTILE IRON PIPE, FITTINGS, AND VALVES SHALL BE EPOXY LINED AND COATED.
  - ALL GATE VALVES SHALL HAVE HAND WHEELS.
  - ALL INTERIOR SURFACES OF CONCRETE WET WELL STRUCTURE SHALL BE COATED WITH A TWO-PART SYSTEM CONSISTING OF AN EPOXY BASE COAT AND A HIGH BUILD POLYURETHANE ELASTOMER TOP COAT PER SPECIFICATION. COATING SHALL BE APPLIED AFTER THE WET WELL STRUCTURE IMPROVEMENTS ARE COMPLETE AND PRIOR TO THE INSTALLATION OF NEW EQUIPMENT.
  - ALL SURFACES TO BE COATED SHALL BE THOROUGHLY CLEANED AND PREPARED ACCORDING TO THE SPECIFICATIONS PRIOR TO COATING.
  - SOCKET BASE FOR PORTABLE DAVIT CRANE SHALL BE A THERN MODEL 510F. BASE SHALL BE STAINLESS STEEL AND MOUNTED FLUSH WITH THE TOP OF CONCRETE.
  - EXPANSION JOINT MATERIAL INSTALLED BETWEEN STRUCTURES SHALL BE "FIBRE EXPANSION JOINT" BY W.R. MEADOWS OR APPROVED EQUAL.

				WORK ACCEPTED:		INSPECTOR:		DRAWN: LNF		DESIGN: PCJ		HOR: AS SHOWN	
								CHECKED: 				VERT: AS SHOWN	
								APPROVED: 		DATE: 2/16/18		JOB NUMBER: MHIL.21.15	
NO. DESCRIPTION DATE BY				BY: DATE:									
PATH				REVISIONS				CITY/ENGR: SCOTT CREER					
								RCE					

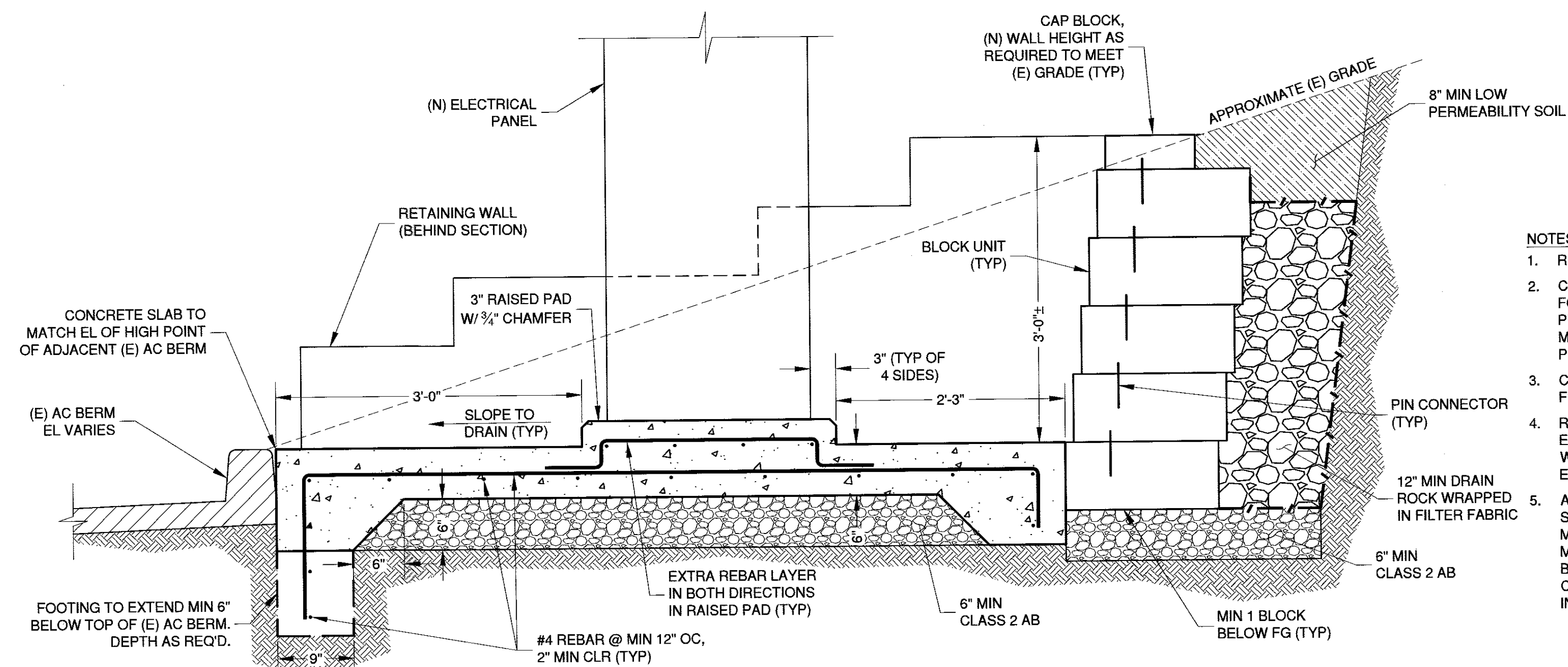
**City of Morgan Hill**  
Public Works Department  
100 Edes Ct. Morgan Hill, CA 95037 (408)778-6480, Fax (408)779-7236

**Schaaf & Wheeler**  
CONSULTING CIVIL ENGINEERS  
1171 HOMESTEAD ROAD, STE 255  
SANTA CLARA, CA 95050  
(408) 246-4848



**LIFT STATION J IMPROVEMENT  
PLAN & SECTIONS**  
**SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION**

FILE NUMBER: -  
PRINT DATE: 2/16/2018  
SHEET NUMBER: 6 of 25

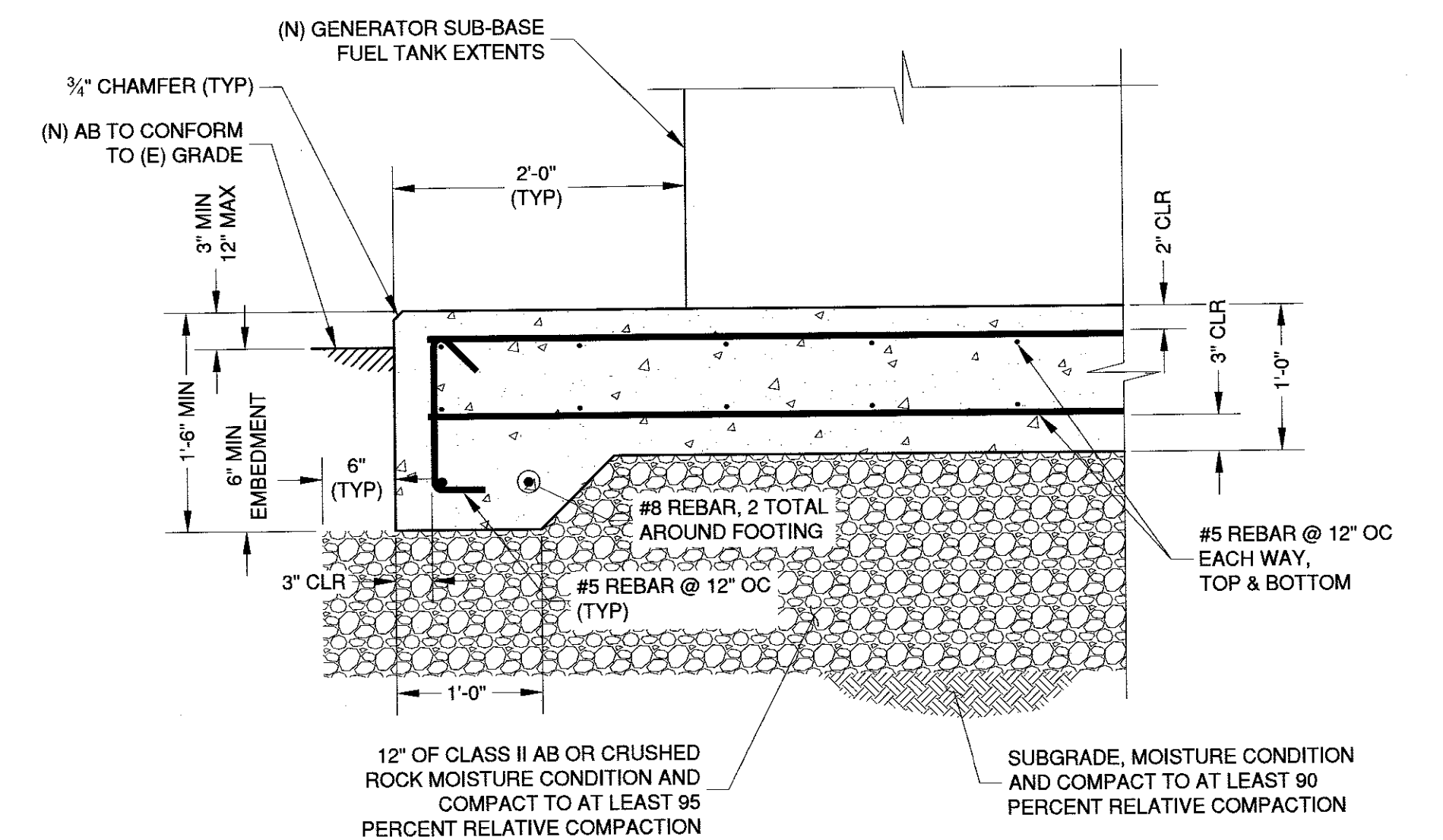


PANEL SLAB AND BLOCK WALL DETAIL

1" = 1'-0"

1  
7

- NOTES:
1. REPLACE ANY DAMAGED AC BERM OR PAVEMENT.
  2. CALTRANS CLASS 2 AGGREGATE BASE FOR CONCRETE FOUNDATION AND WALL SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT RELATIVE COMPACTION. SOIL SUBGRADE SHALL BE MOISTURE CONDITIONED AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION.
  3. CONCRETE SLAB FOOTING SHALL EXTEND A MINIMUM OF 6" BELOW FINISH GRADE OR EXISTING GRADE, WHICHEVER IS DEEPER.
  4. RETAINING WALLS TO THE SIDES OF NEW ELECTRICAL PANEL SHALL EXTEND TO APPROXIMATELY 6 INCHES HORIZONTALLY BEYOND WHERE THE GRADE OF THE NEW CONCRETE SLAB MATCHES THE EXISTING GRADE.
  5. AT CAST-IN-PLACE CONCRETE SLAB INTERFACE WITH CONCRETE STRUCTURES (INCLUDING CONCRETE BOXES), AN EXPANSION JOINT MATERIAL AND SEALANT SHALL BE USED. EXPANSION JOINT MATERIAL SHALL BE "FIBRE EXPANSION JOINT" AS MANUFACTURED BY W.R. MEADOWS OR APPROVED EQUAL. INSTALLATION SHALL CONFORM WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS.

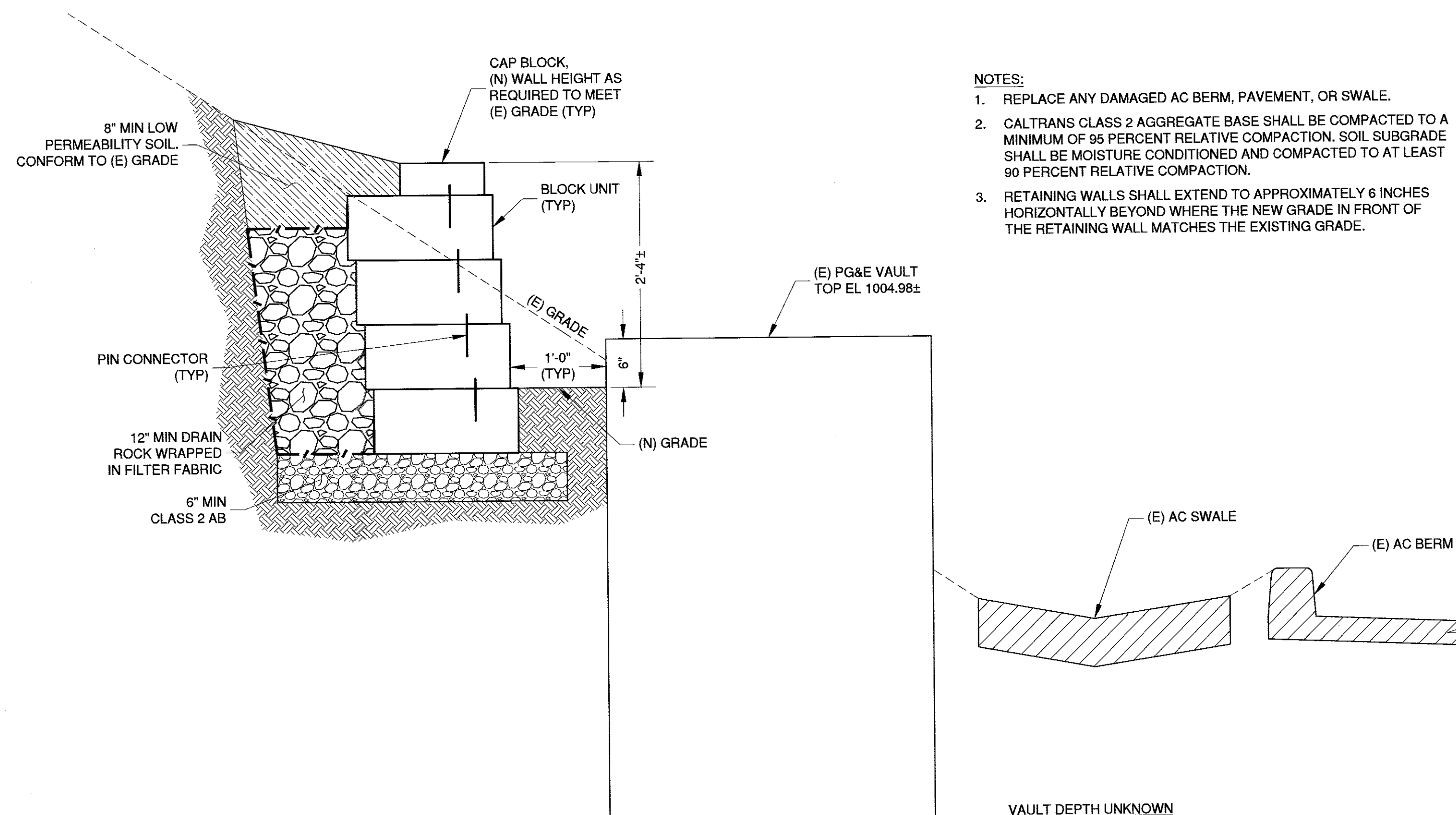


- NOTES:
1. SLOPE SLAB TO DRAIN OFF EDGES OF SLAB.

GENERATOR CONCRETE SLAB DETAIL

N.T.S.

3  
7

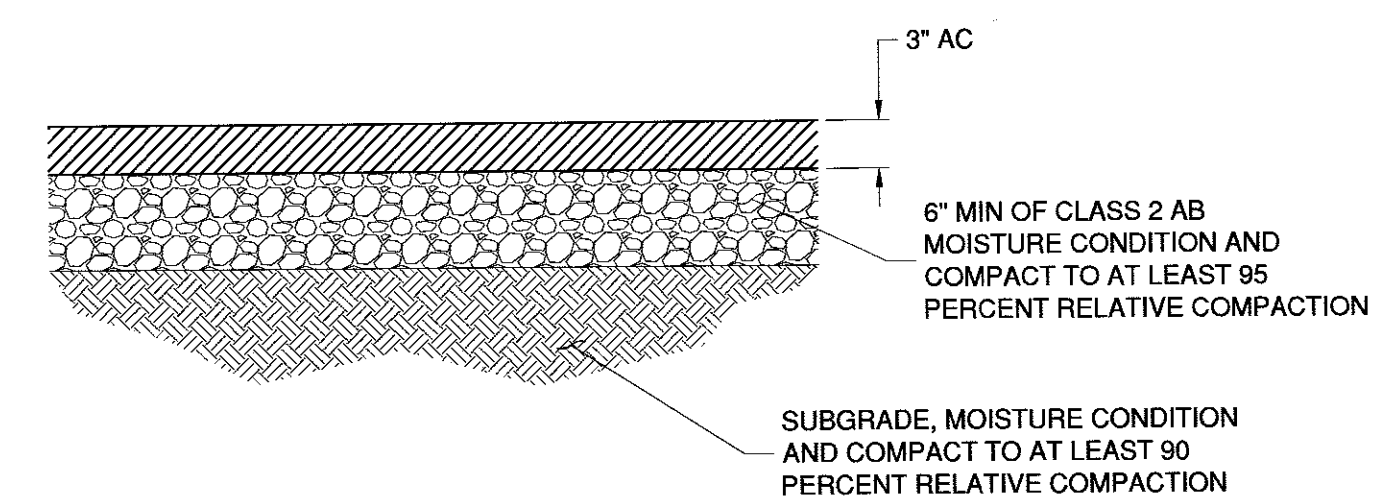


VAULT BLOCK WALL DETAIL

1" = 1'-0"

2  
7

- NOTES:
1. REPLACE ANY DAMAGED AC BERM, PAVEMENT, OR SWALE.
  2. CALTRANS CLASS 2 AGGREGATE BASE SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT RELATIVE COMPACTION. SOIL SUBGRADE SHALL BE MOISTURE CONDITIONED AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION.
  3. RETAINING WALLS SHALL EXTEND TO APPROXIMATELY 6 INCHES HORIZONTALLY BEYOND WHERE THE NEW GRADE IN FRONT OF THE RETAINING WALL MATCHES THE EXISTING GRADE.






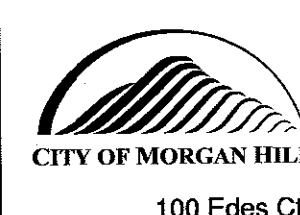
NOTE: EXISTING PAVEMENT WHICH IS TO BE JOINED BY NEW PAVEMENT SHALL BE SAW CUT VERTICALLY TO PROVIDE STRAIGHT, TRUE, AND NEAT JOINTS. THE VERTICAL EDGES SHALL BE TACKED PRIOR TO PAVING.

AC PAVEMENT DETAIL

N.T.S.

4  
7

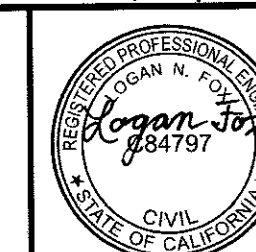
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				AS-BUILT CORRECTIONS		CHECKED: 		APPROVED: 		DATE: 2/16/18		VERT: AS SHOWN	
						APPROVED: 		DATE: 2/16/18		JOB NUMBER: MHIL.21.15			
NO.		DESCRIPTION		DATE		BY		BY:		DATE:			
PATH				REVISIONS				CITYENGR JCE		SCOTT CREER			



**City of Morgan Hill**  
Public Works Department

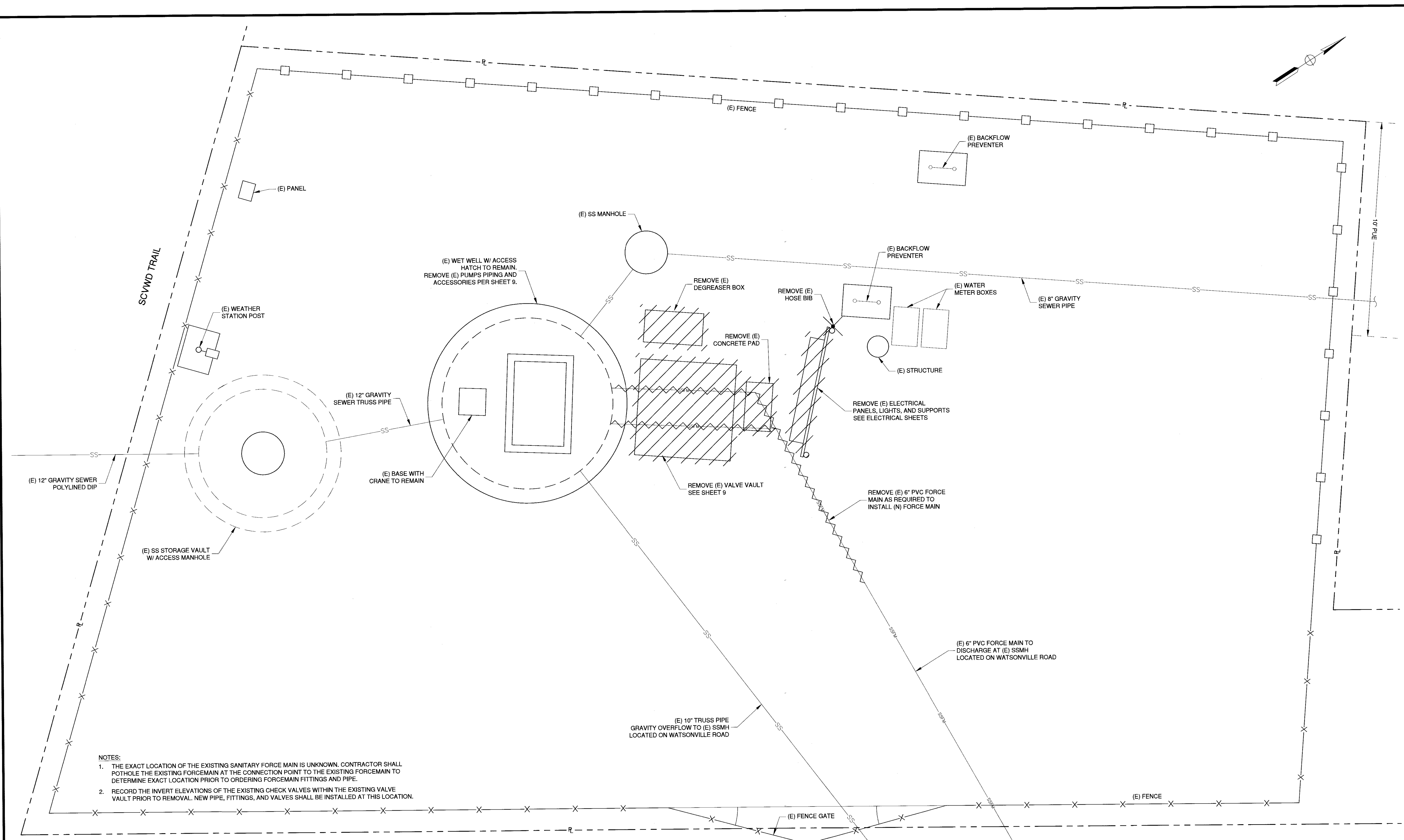
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CONSULTING CIVIL ENGINEERS  
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LIFT STATION J  
CIVIL DETAILS  
SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION

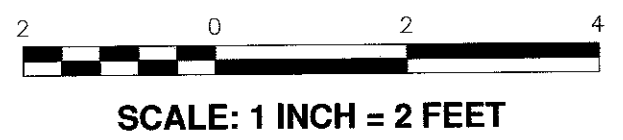
FILE NUMBER:  
PRINT DATE:  
2/16/2018  
SHEET NUMBER:  
7 of 25




**NOTES:**

1. THE EXACT LOCATION OF THE EXISTING SANITARY FORCE MAIN IS UNKNOWN. CONTRACTOR SHALL POTHOLE THE EXISTING FORCEMAIN AT THE CONNECTION POINT TO THE EXISTING FORCEMAIN TO DETERMINE EXACT LOCATION PRIOR TO ORDERING FORCEMAIN FITTINGS AND PIPE.
2. RECORD THE INVERT ELEVATIONS OF THE EXISTING CHECK VALVES WITHIN THE EXISTING VALVE VAULT PRIOR TO REMOVAL. NEW PIPE, FITTINGS, AND VALVES SHALL BE INSTALLED AT THIS LOCATION.

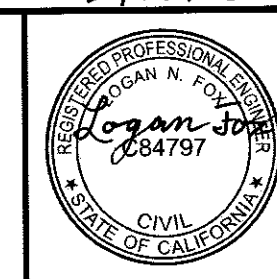
**SITE DEMOLITION PLAN**  
1" = 4'



NO.		DESCRIPTION		DATE	BY
PATH					
WORK ACCEPTED:		INSPECTOR:		DATE:	
AS-BUILT CORRECTIONS		DATE:		DATE:	
DRAWN: LNF		DESIGN: PCJ		HOR: AS SHOWN	
CHECKED: <i>[Signature]</i>		DATE: 2/16/18		VERT: AS SHOWN	
APPROVED: <i>[Signature]</i>		DATE: 2/16/18		JOB NUMBER: MHIL.21.15	
CITY ENGINEER: SCOTT CREER					


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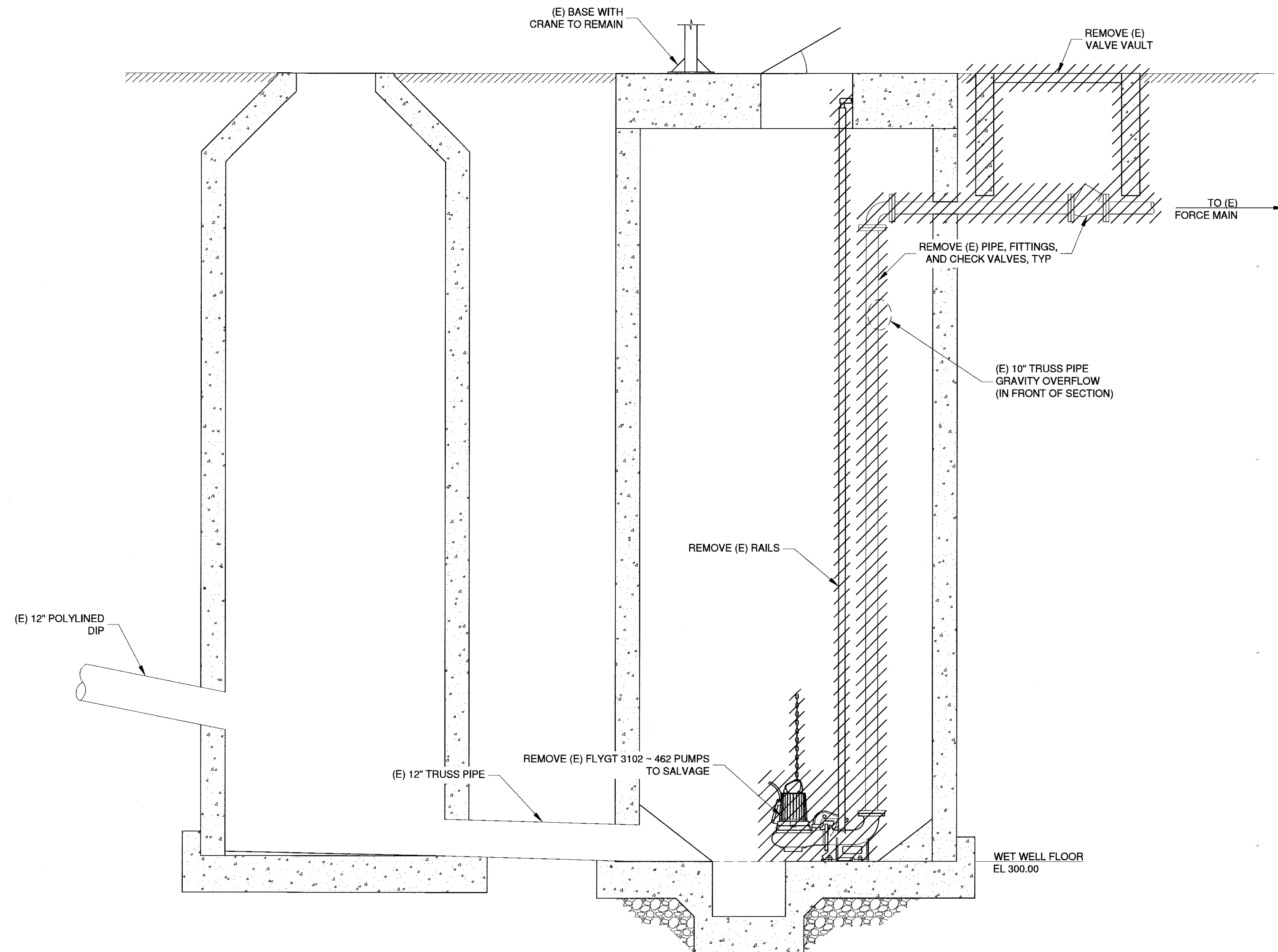
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 CONSULTING CIVIL ENGINEERS  
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 SANTA CLARA, CA 95050  
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**LIFT STATION W**  
**SITE DEMOLITION PLAN**  
**SANITARY SEWER LIFT STATIONS**  
**J & W REHABILITATION**

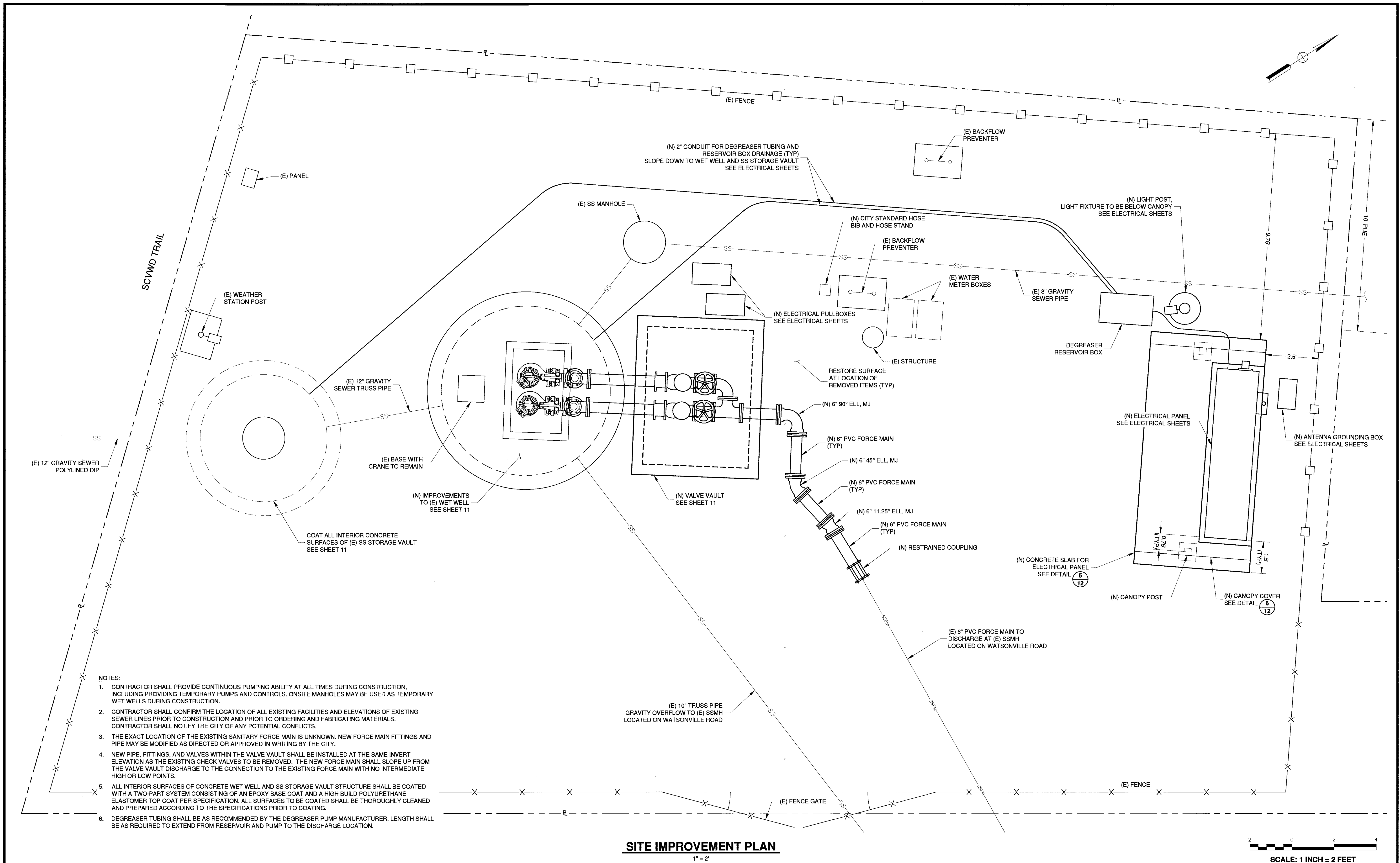
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PRINT DATE:	2/16/2018
SHEET NUMBER:	<b>8 of 25</b>





- DEMOLITION NOTES:
1. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING FACILITIES TO REMAIN.
  2. REMOVE EXISTING CONTROL EQUIPMENT FROM WET WELL.
  3. EXISTING METAL ANCHORED TO THE EXISTING CONCRETE STRUCTURES SHALL BE CUT AND GROUND FLUSH WITH THE CONCRETE SURFACE.
  4. CITY SHALL HAVE THE RIGHT OF FIRST REFUSAL FOR PUMPS, ACCESSORIES, AND ALL OTHER EQUIPMENT TO BE REMOVED UNDER THE WORK OF THIS PROJECT. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING EQUIPMENT TO BE SALVAGED. CONTRACTOR SHALL TRANSPORT ANY SALVAGED EQUIPMENT TO CITY MAINTENANCE YARD LOCATED AT 100 EDIES COURT, MORGAN HILL.

				WORK ACCEPTED:	INSPECTOR:	DRAWN: LNF	DESIGN: PCJ	HOR: AS SHOWN	 <b>City of Morgan Hill</b> Public Works Department 100 Edes Ct. Morgan Hill, CA 95037 (408)778-6480, Fax (408)779-7236	<b>Schaaf &amp; Wheeler</b> CONSULTING CIVIL ENGINEERS 1171 HOMESTEAD ROAD, STE 255 SANTA CLARA, CA 95050 (408) 246-4848		LIFT STATION W DEMOLITION SECTION SANITARY SEWER LIFT STATIONS J & W REHABILITATION	FILE NUMBER:
AS-BUILT CORRECTIONS				CHECKED: <i>[Signature]</i>	VERT: AS SHOWN	DATE: 2/16/18	JOB NUMBER: MHIL.21.15	PRINT DATE: 2/16/2018					
NO.	DESCRIPTION	DATE	BY	BY:	DATE:			SHEET NUMBER: 9 of 25					
PATH				REVISIONS		CITY ENGINEER: SCOTT CREER							



NO.				DESCRIPTION				DATE				BY			
PATH															

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		LNF	PCJ	AS SHOWN
AS-BUILT CORRECTIONS		CHECKED:		VERT:
		APPROVED:		AS SHOWN
		DATE:	2/16/18	JOB NUMBER:
				MHIL.21.15
		CITY ENGINEER:	SCOTT CREER	

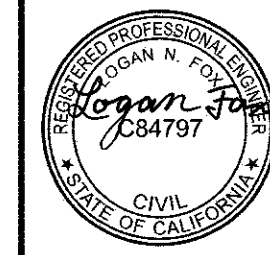


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Public Works Department

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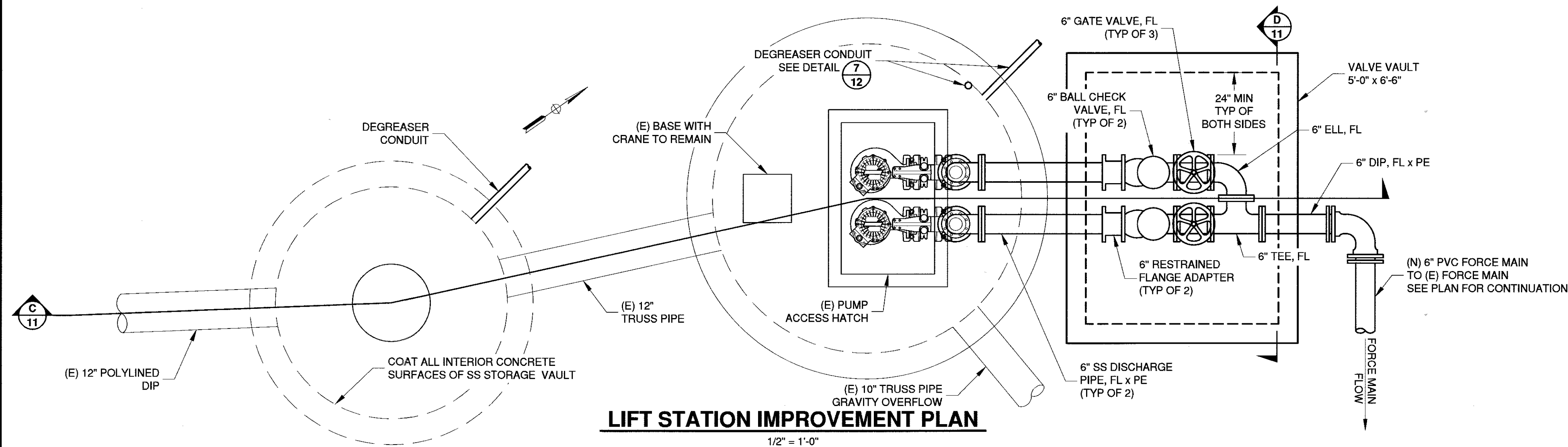
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2/16/18

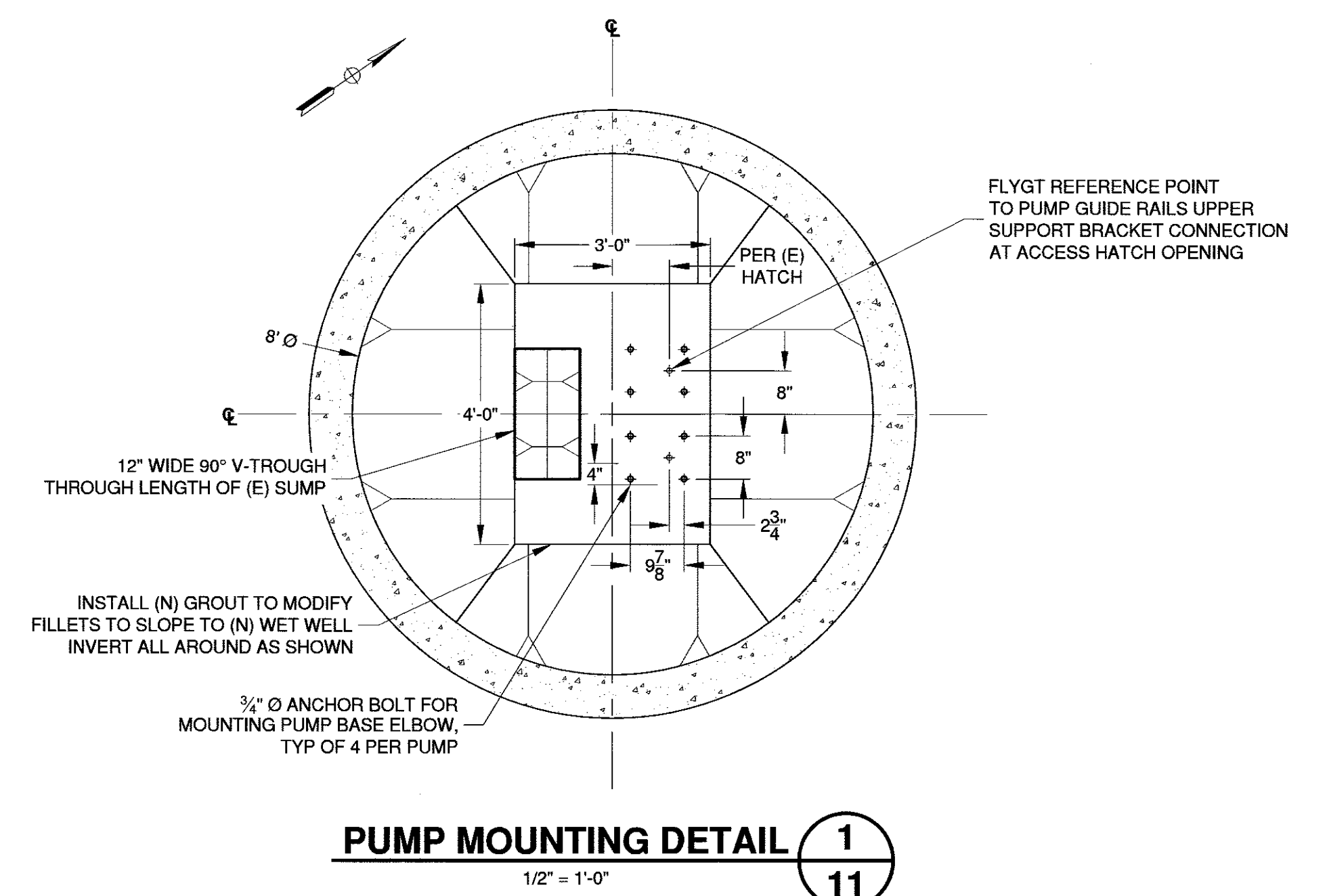
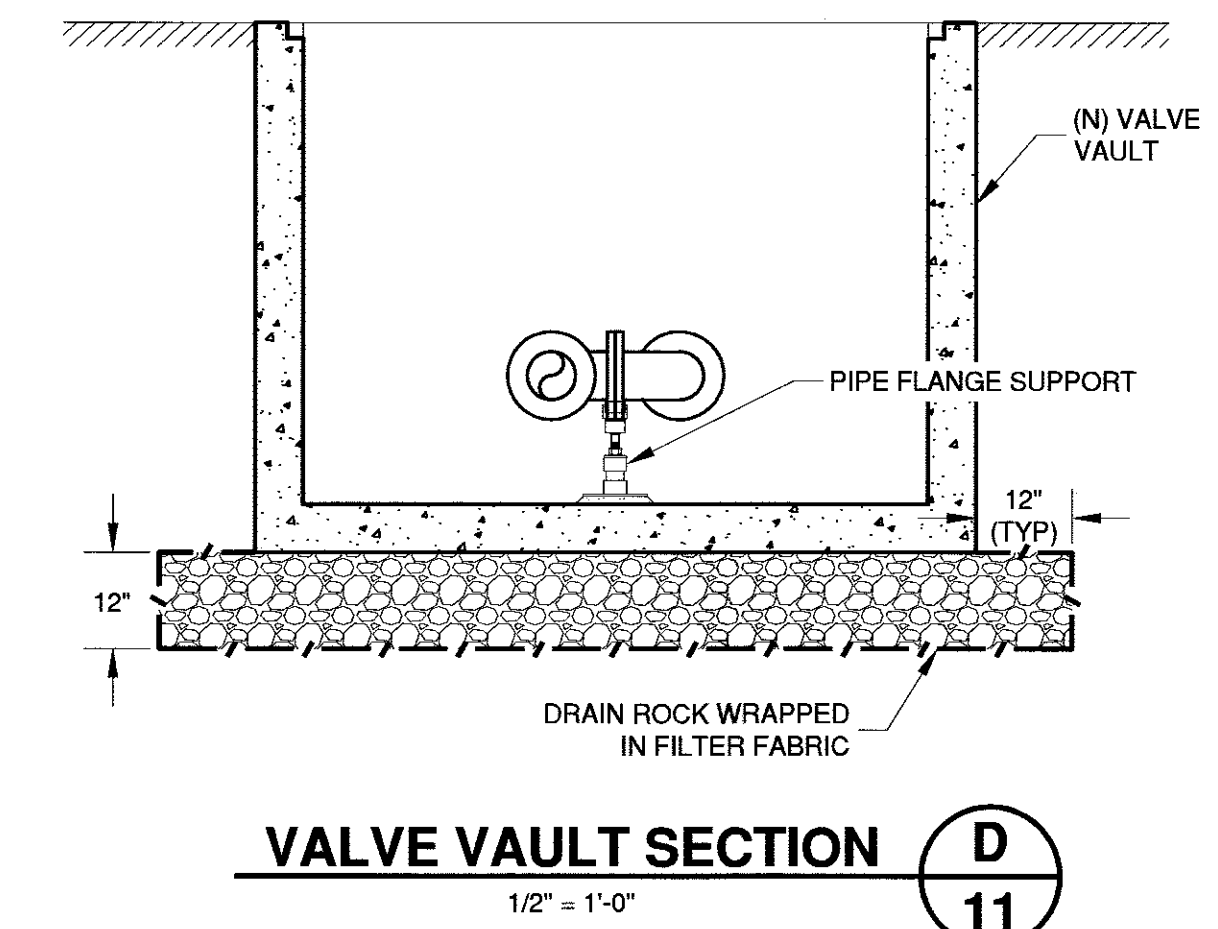
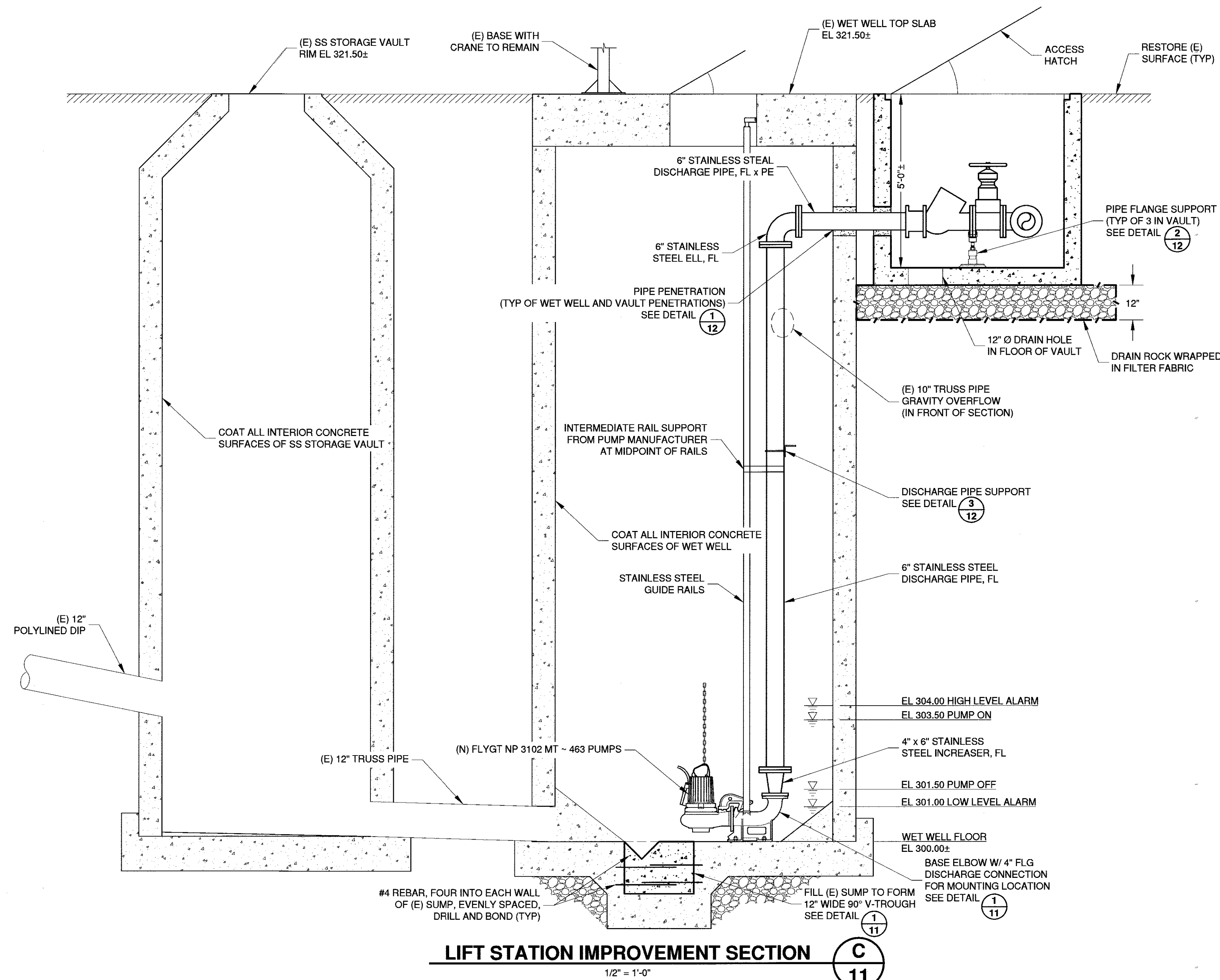




**LIFT STATION W  
SITE IMPROVEMENT PLAN  
SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION**

FILE NUMBER:  
PRINT DATE:  
2/16/2018  
SHEET NUMBER:  
**10 of 25**



- NOTES:
1. PUMP CONTROL LEVELS SHOWN ARE BASED ON AN APPROXIMATE WET WELL FLOOR ELEVATION. ACTUAL PUMP CONTROL LEVELS SHALL BE ADJUSTED BASED ON ACTUAL WET WELL FLOOR ELEVATION.
  2. ALL MJ FITTINGS AND UNRESTRAINED JOINTS SHALL BE RESTRAINED WITH EBAA MEGALUGS OR APPROVED EQUIVALENT.
  3. ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH A POLYETHYLENE ENCASUREMENT PER AWWA STANDARD C105.
  4. ALL HARDWARE SHALL BE TYPE 316 STAINLESS STEEL UNLESS OTHERWISE SPECIFIED. ALL NEW DUCTILE IRON PIPE, FITTINGS, AND VALVES SHALL BE EPOXY LINED AND COATED.
  5. ALL GATE VALVES SHALL HAVE HAND WHEELS.
  6. ALL INTERIOR SURFACES OF CONCRETE WET WELL AND SS STORAGE VAULT STRUCTURES SHALL BE COATED WITH A TWO-PART SYSTEM CONSISTING OF AN EPOXY BASE COAT AND A HIGH BUILD POLYURETHANE ELASTOMER TOP COAT PER SPECIFICATION. COATING SHALL BE APPLIED AFTER THE WET WELL STRUCTURE IMPROVEMENTS ARE COMPLETE AND PRIOR TO THE INSTALLATION OF NEW EQUIPMENT.
  7. ALL SURFACES TO BE COATED SHALL BE THOROUGHLY CLEANED AND PREPARED ACCORDING TO THE SPECIFICATIONS PRIOR TO COATING.



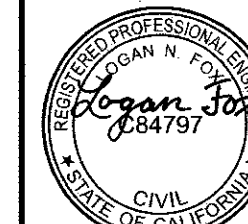
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NO. DESCRIPTION				DATE		BY		BY: DATE:					
PATH								REVISIONS				CITY ENGINEER: SCOTT CREER	



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Public Works Department

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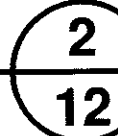
**LIFT STATION W IMPROVEMENT  
PLAN & SECTIONS**  
**SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION**

FILE NUMBER:  
PRINT DATE:  
2/16/2018  
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**1**  
**12**


$$\frac{5}{12}$$

$$\frac{2}{12}$$


**3**  
**12**


$$\frac{6}{12}$$

$$\frac{7}{12}$$


CITY OF MORGAN HILL

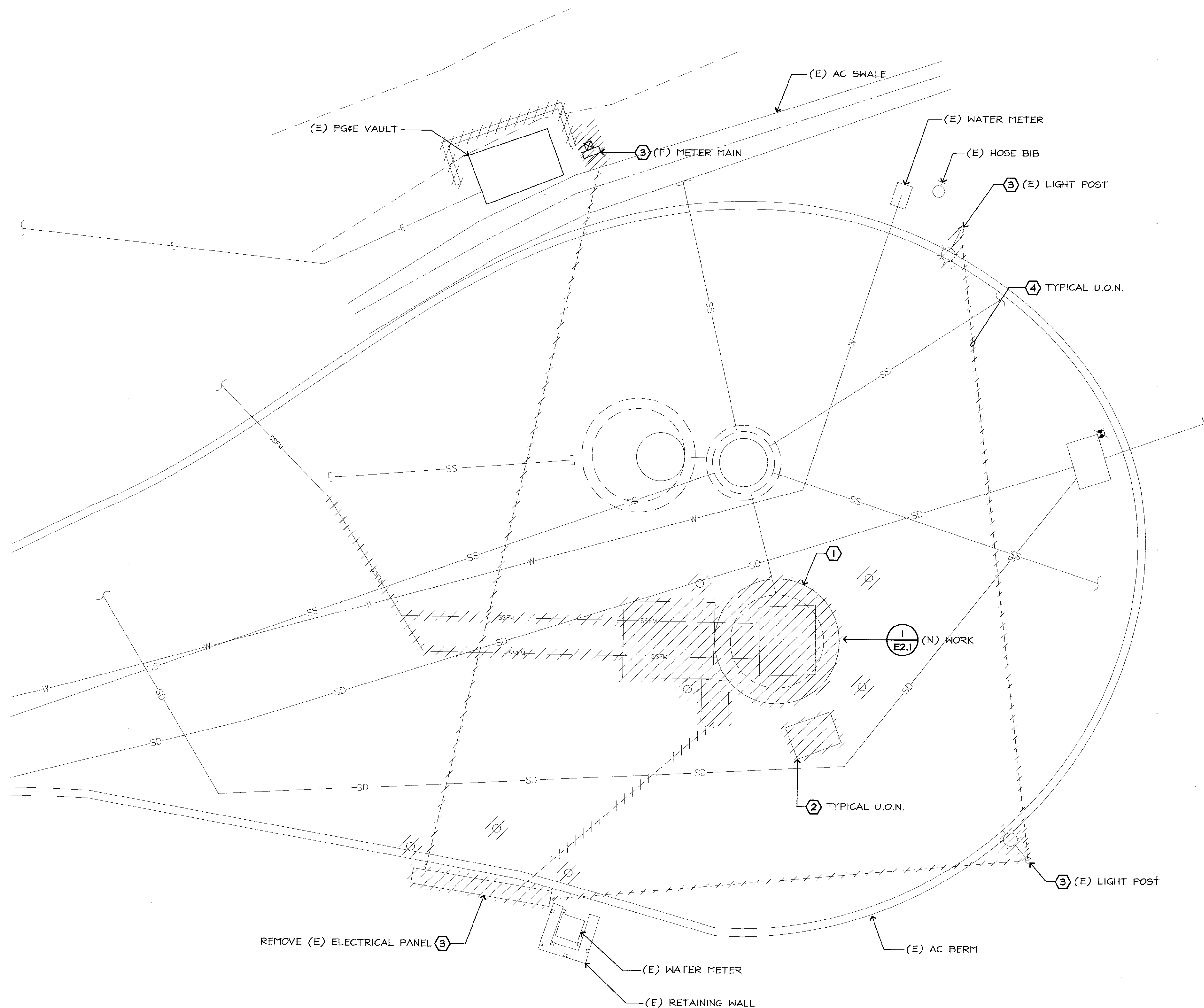
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12/16/2018  
SHEET NUMBER:  
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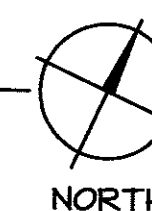
# **SHEET NOTES**

1. DISCONNECT & DEMOLISH ELECTRICAL EQUIPMENT IN WET WELL; COORDINATE WITH CIVIL WORK.
2. DEMOLISHED UNDER CIVIL PLANS; COORDINATE.
3. DISCONNECT AND DEMOLISH EQUIPMENT.
4. REMOVE (E) UNDERGROUND CIRCUIT; ABANDON CONDUIT IN PLACE.



## **1 LIFT STATION J ELECTRICAL DEMOLITION PLAN** 1/4"=1'-0"

4' 2' 0' 4' 8'  
1/4"=1'-0"



NO.		DESCRIPTION	DATE	BY	DATE
PATH		REVISIONS			

WORK ACCEPTED: INSPECTOR:

AS-BUILT CORRECTIONS

DRAWN: C.L. DESIGN: T.P.

CHECKED: *[Signature]*

APPROVED: *[Signature]* DATE: 2/14/18

CITY ENGINEER: SCOTT CREER

HOR: AS SHOWN

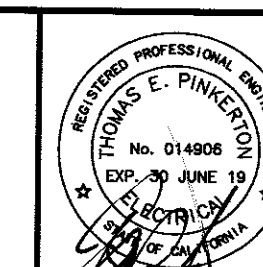
VERT: AS SHOWN

JOB NUMBER: MHIL.21.15



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1171 HOMESTEAD ROAD, STE 255  
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(408) 246-4848



**LIFT STATION J  
ELECTRICAL DEMOLITION PLAN  
SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION**

**FEHR ENGINEERING COMPANY, INC.**  
9057 SOQUEL DRIVE,  
BLDG. B, SUITE G  
APTO, CALIFORNIA, 95003  
PHONE: (831) 786-0373  
FAX: (831) 786-8523  
EMAIL: [tpinkerton@fehrengineering.com](mailto:tpinkerton@fehrengineering.com)  
CONSULTING ELECTRICAL ENGINEERS  
FE JOB No. 17055.00

FILE NUMBER:

PRINT DATE:  
2/16/2018

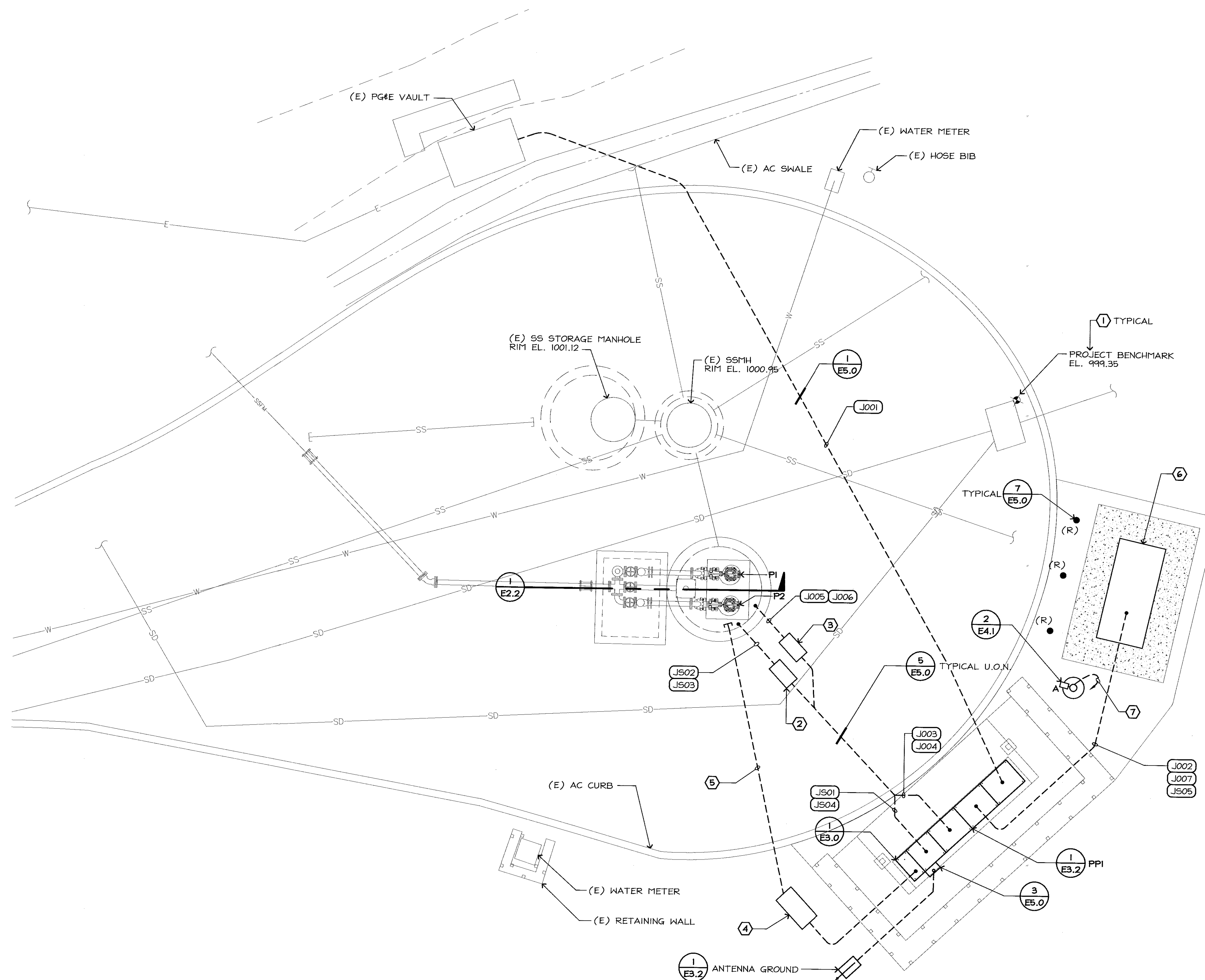
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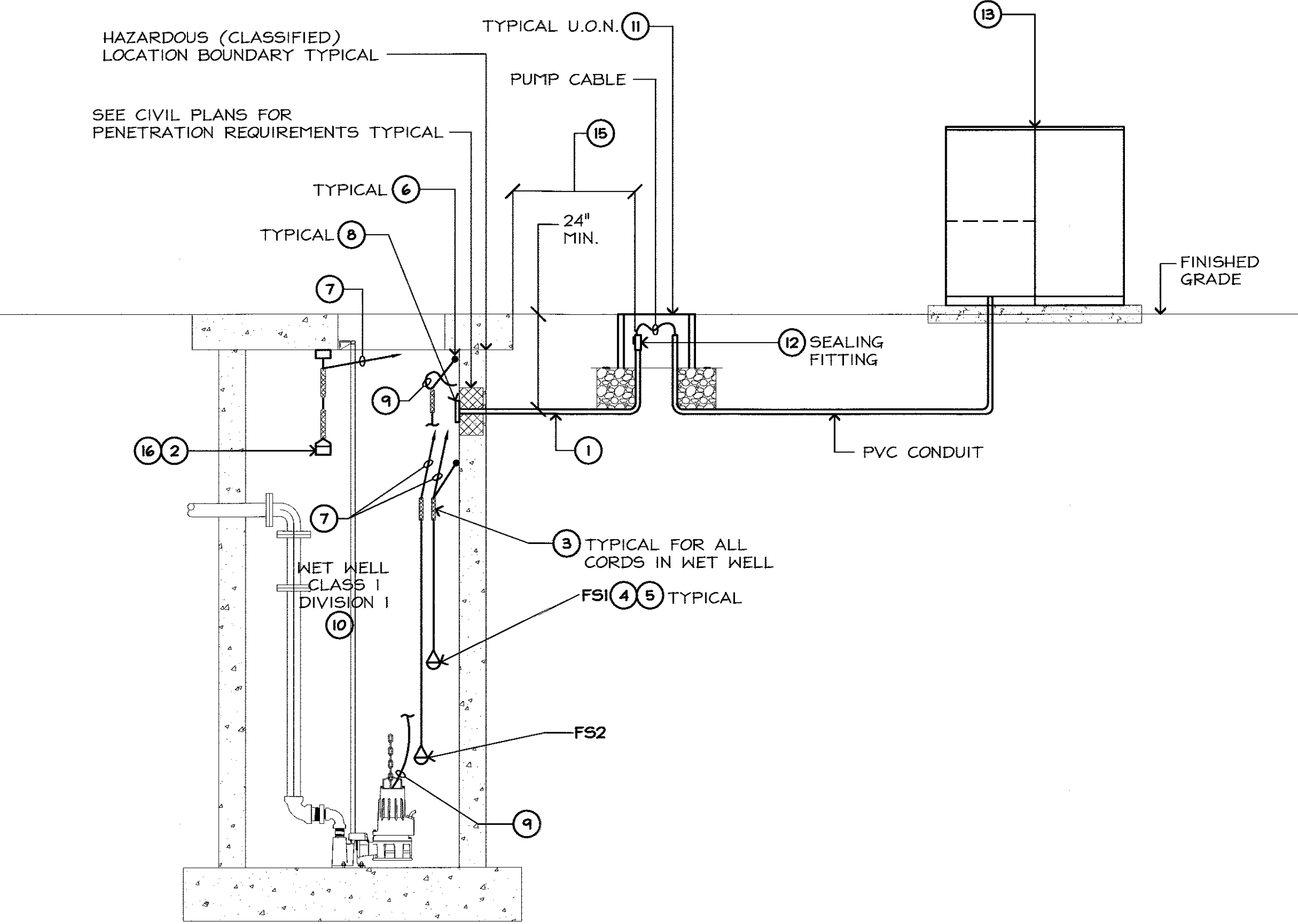
# **SHEET NOTES**

1. COORDINATE (N) WORK WITH CIVIL PLANS.
2. CONCRETE PULLBOX 22" X 12" I.D. WITH TRAFFIC RATED LID; LABEL LID "SIGNAL"; SEE DETAIL 1/E2.2.
3. CONCRETE PULLBOX 22" X 12" I.D. WITH TRAFFIC RATED LID; LABEL LID "POWER"; SEE DETAIL 1/E2.2.
4. DEGREASER RESERVOIR; SEE DETAIL 1/E3.2.
5. 2" C.O. PROVIDED UNDER CIVIL PLANS; COORDINATE.
6. (N) GENERATOR; SEE ELECTRICAL SPECIFICATION.
7. ROUTE CIRCUIT VIA LIGHTING CONTROLS IN POWER PEDESTAL.





DETAIL NOTES:

1. PVC COATED GALVANIZED RIGID STEEL CONDUITS (POWER AND SIGNAL) TO PULLBOX; EXACT ROUTE OF CONDUIT TO BE DETERMINED IN FIELD.
2. ULTRASONIC LEVEL TRANSDUCER; RANGE 1-26 FEET; -20°C-65°C; BEAM ANGLE 10°-12°; 4-20mA SIGNAL; TRANSDUCER COMPATIBLE WITH CONTROLS PLC; EMERSON OR APPROVED EQUAL.
3. CABLE SUPPORT GRIP, HEAVY DUTY STAINLESS STEEL, OFFSET EYE SPLIT MESH. ROD CLOSING "KELLUMS" OR APPROVED EQUAL.
4. COORDINATE FS MOUNTING HEIGHT WITH CIVIL PLANS.
5. FLOAT SWITCH; MECHANICAL TILT FLOAT SWITCH; ENM-10 LEVEL REGULATOR BY ITT FLYGT. PROVIDE WITH INTRINSICALLY SAFE INTERFACE DEVICE.
6. SECURE CABLE GRIP TO WET WELL STRUCTURE.
7. SIGNAL CIRCUIT THROUGH WETWELL WALL; PENETRATE WALL AS SHOWN FOR POWER CORD.
8. BELL ADAPTER SET FLUSH INTO GROUT OF WALL PENETRATION.
9. (N) PUMP POWER CORD; SEE STATION SINGLE LINE DIAGRAM FOR CONNECTION REQUIREMENTS.
10. WET WELL IS A HAZARDOUS (CLASSIFIED) LOCATION; CLASS I DIVISION I; ELECTRICAL INSTALLATION SHALL COMPLY ACCORDINGLY.
11. INGROUND CONCRETE PULLBOX (POWER PULLBOX SHOWN; SIGNAL PULLBOX SIMILAR); SEE SITE PLAN FOR SIZE; SEE DETAIL 6/ES.0 FOR PULLBOX INSTALLATION REQUIREMENT.
12. EYS SEALING FITTING; SIZED FOR CONDUIT SEE SINGLE LINE DIAGRAM; SEAL ALL CONDUITS LEAVING THE WETWELL.
13. POWER PEDESTAL; SEE STATION POWER PEDESTAL DETAIL.
14. DETAIL REPRESENTS A GENERIC WETWELL INSTALLATION APPLICABLE TO EACH SPECIFIC WETWELL; SEE SPECIFIC WETWELL ELEVATION ON CIVIL PLANS FOR EXACT REQUIREMENTS.
15. SEAL CONDUIT WITHIN 10' OF HAZARDOUS (CLASSIFIED) LOCATION BOUNDARY.
16. LOCATE ULTRASONIC TRANSDUCER FOR CLEAR LINE OF SIGHT TO LIQUID LEVEL.



1 LIFT STATIONS J & W WETWELL ELECTRICAL ELEVATION 14  
NO SCALE

FEHR ENGINEERING COMPANY, INC.  
9057 SOQUEL DRIVE,  
BLDG. B, SUITE G  
APTOS, CALIFORNIA, 95003  
PHONE: (831) 786-0373  
FAX: (831) 786-8523  
EMAIL: [tpinkerton@fehrengineering.com](mailto:tpinkerton@fehrengineering.com)  
CONSULTING ELECTRICAL ENGINEERS  
FE JOB No. 17055.00

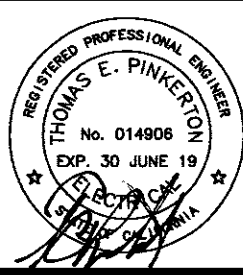
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NO.		DESCRIPTION			DATE		BY:		DATE:		APPROVED: 		DATE: 2/16/18		JOB NUMBER: MHIL.21.15	
PATH				REVISIONS								CITY/ENGR: SCOTT CREER				



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Public Works Department

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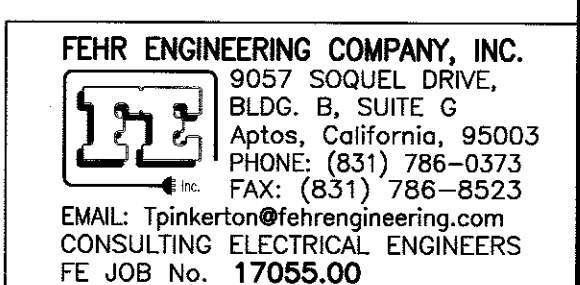
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SANTA CLARA, CA 95050  
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LIFT STATIONS J & W  
WETWELL ELECTRICAL ELEVATION  
SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION

FILE NUMBER:  
PRINT DATE:  
2/16/2018  
SHEET NUMBER: E2.2  
16 of 25

1. DISCONNECT & DEMOLISH ELECTRICAL EQUIPMENT IN WET WELL;  
COORDINATE WITH CIVIL WORK.
2. DEMOLISHED UNDER CIVIL PLANS; COORDINATE.
3. DISCONNECT AND DEMOLISH EQUIPMENT.
4. EQUIPMENT TO REMAIN.

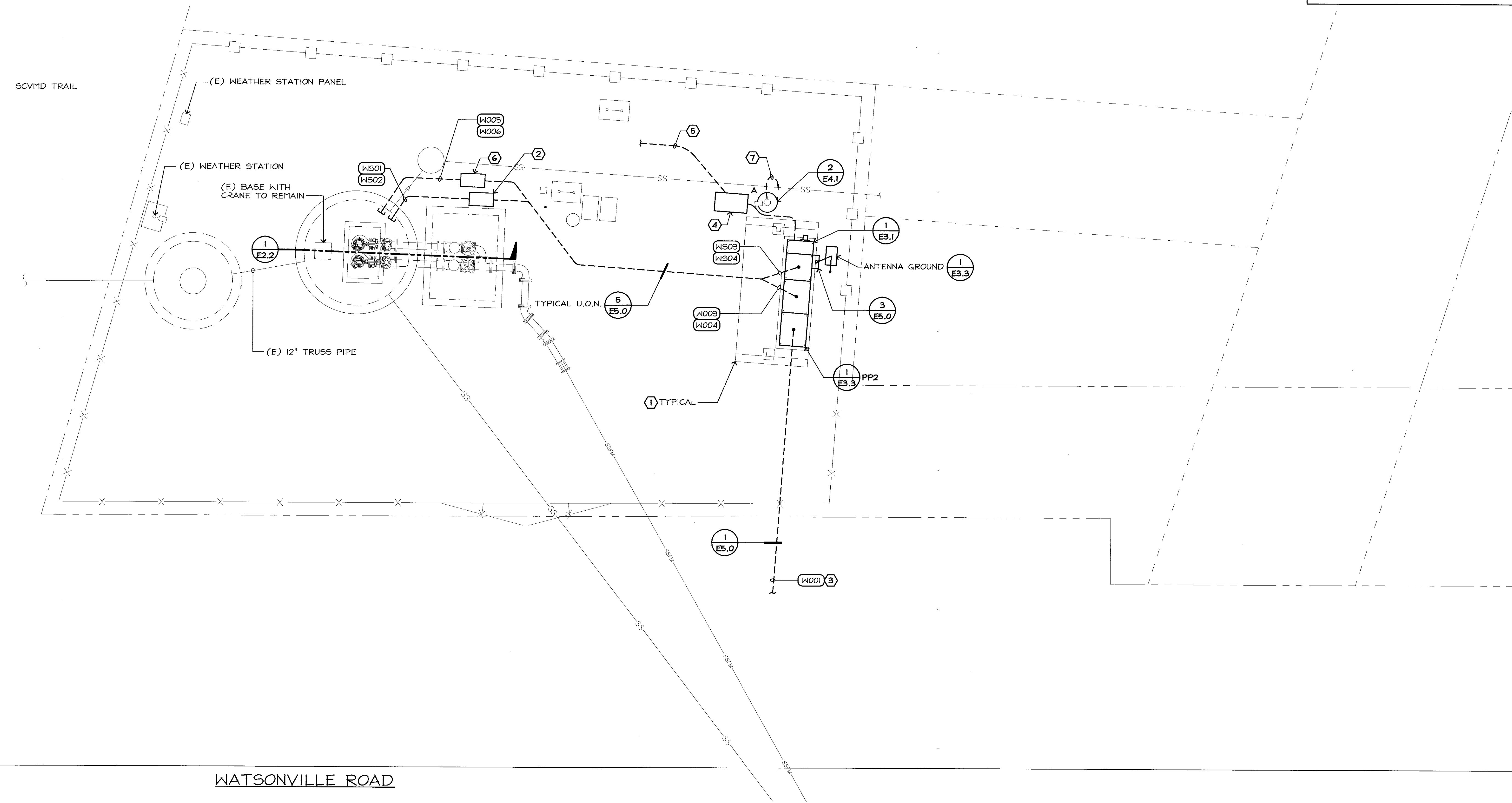


										WORK ACCEPTED:		INSPECTOR:		DRAWN: C.L.		DESIGN: T.P.		HOR: AS SHOWN		<div><div><div><div>City of Morgan Hill</div><div>Public Works Department</div><div>100 Edes Ct. Morgan Hill, CA 95037 (408)778-6480, Fax (408)779-7236</div></div></div><div><div>Schaaf &amp; Wheeler</div><div>CONSULTING CIVIL ENGINEERS</div><div>1171 HOMESTEAD ROAD, STE 255</div><div>SANTA CLARA, CA 95050</div><div>(408) 246-4848</div></div><div><div><div>THOMAS E. PINNEROV</div><div>EXP. 30 JUNE 19</div><div>CIVIL ENGINEER - No. 17055-00</div></div></div><div><div>LIFT STATION W</div><div>ELECTRICAL DEMOLITION PLAN</div><div>SANITARY SEWER LIFT STATIONS</div><div>J &amp; W REHABILITATION</div></div><div><div>FILE NUMBER: -</div><div>PRINT DATE: 2/16/2018</div><div>SHEET NUMBER: <b>E2.3</b></div><div><b>17 of 25</b></div></div></div>									
										AS-BUILT CORRECTIONS				CHECKED: <i>[Signature]</i>		VERT: AS SHOWN		JOB NUMBER: MHIL.21.15											
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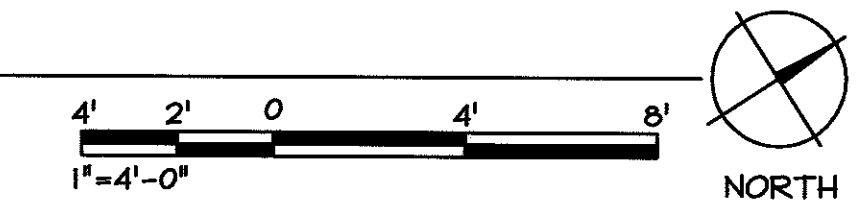


**SHEET NOTES**

1. COORDINATE (N) ELECTRICAL WORK WITH CIVIL PLANS.
2. CONCRETE SIGNAL PULLBOX; 12" x 22" I.D.; SEE DETAIL 1/E2.2.
3. (N) SERVICE CONDUIT TO PG&E SOURCE APPROXIMATELY 120' ACROSS WATSONVILLE ROAD; COORDINATE (N) WORK WITH PG&E.
4. DEGREASER RESERVOIR; SEE DETAIL 1/E3.3.
5. 2"C.O. PROVIDED UNDER CIVIL PLANS; COORDINATE.
6. CONCRETE POWER PULLBOX; 12" x 22" I.D.; SEE DETAIL 1/E2.2.
7. ROUTE CIRCUIT VIA LIGHTING CONTROLS IN POWER PEDESTAL.



**LIFT STATION W ELECTRICAL IMPROVEMENT PLAN**  
1"=4'-0"

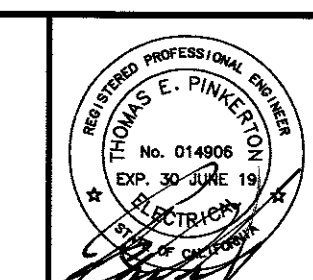


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EMAIL: [tpinkerton@fehrengineering.com](mailto:tpinkerton@fehrengineering.com)  
CONSULTING ELECTRICAL ENGINEERS  
FE JOB No. 17055.00

				WORK ACCEPTED:		INSPECTOR:		DRAWN: C.L.		DESIGN: T.P.		HOR: AS SHOWN	
				AS-BUILT CORRECTIONS				CHECKED: <i>[Signature]</i>		VERT: AS SHOWN			
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**LIFT STATION W  
ELECTRICAL IMPROVEMENT PLAN  
SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION**

FILE NUMBER:  
PRINT DATE:  
SHEET NUMBER: **E2.4**  
**18 of 25**

GENERAL SINGLE LINE NOTES

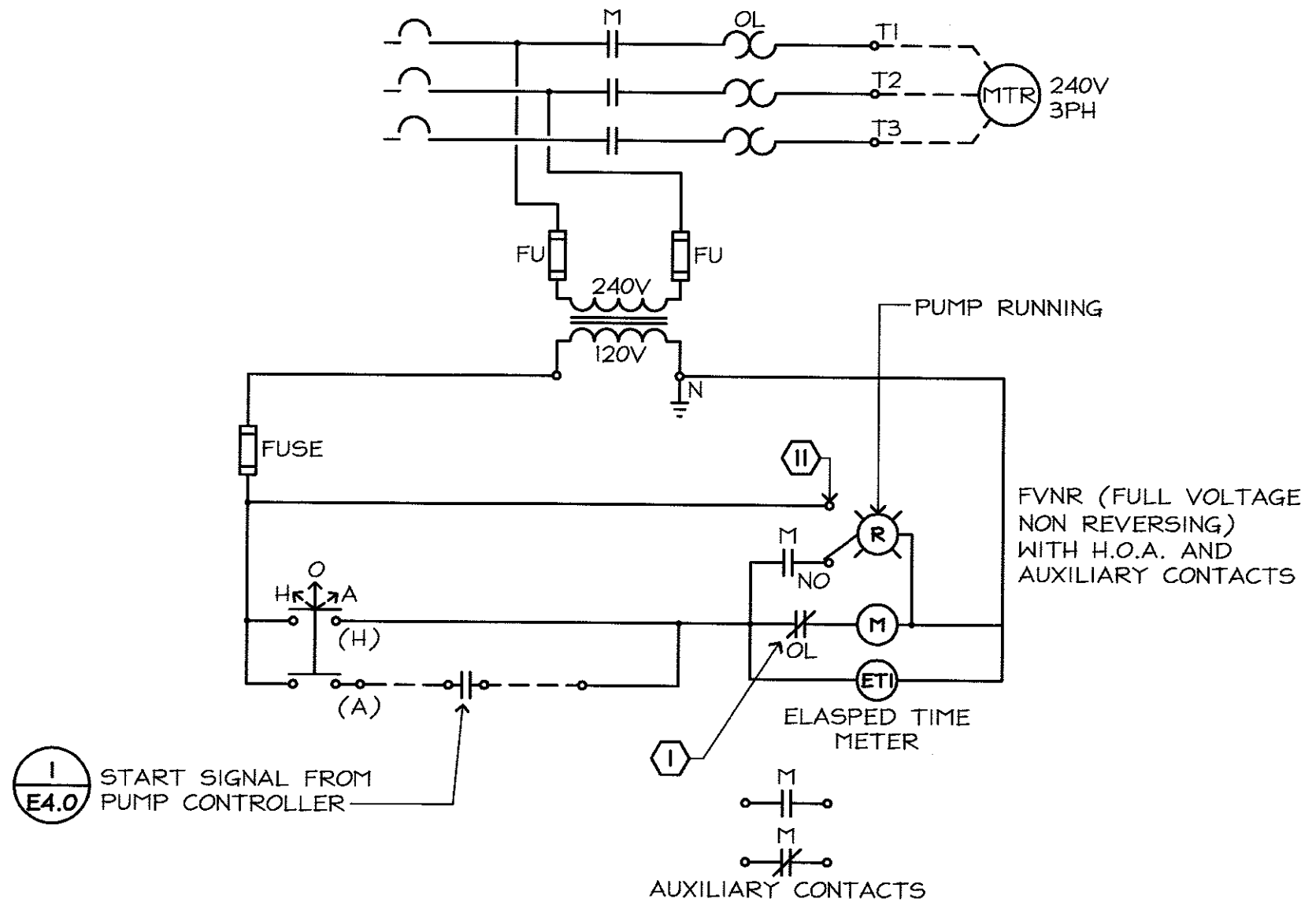
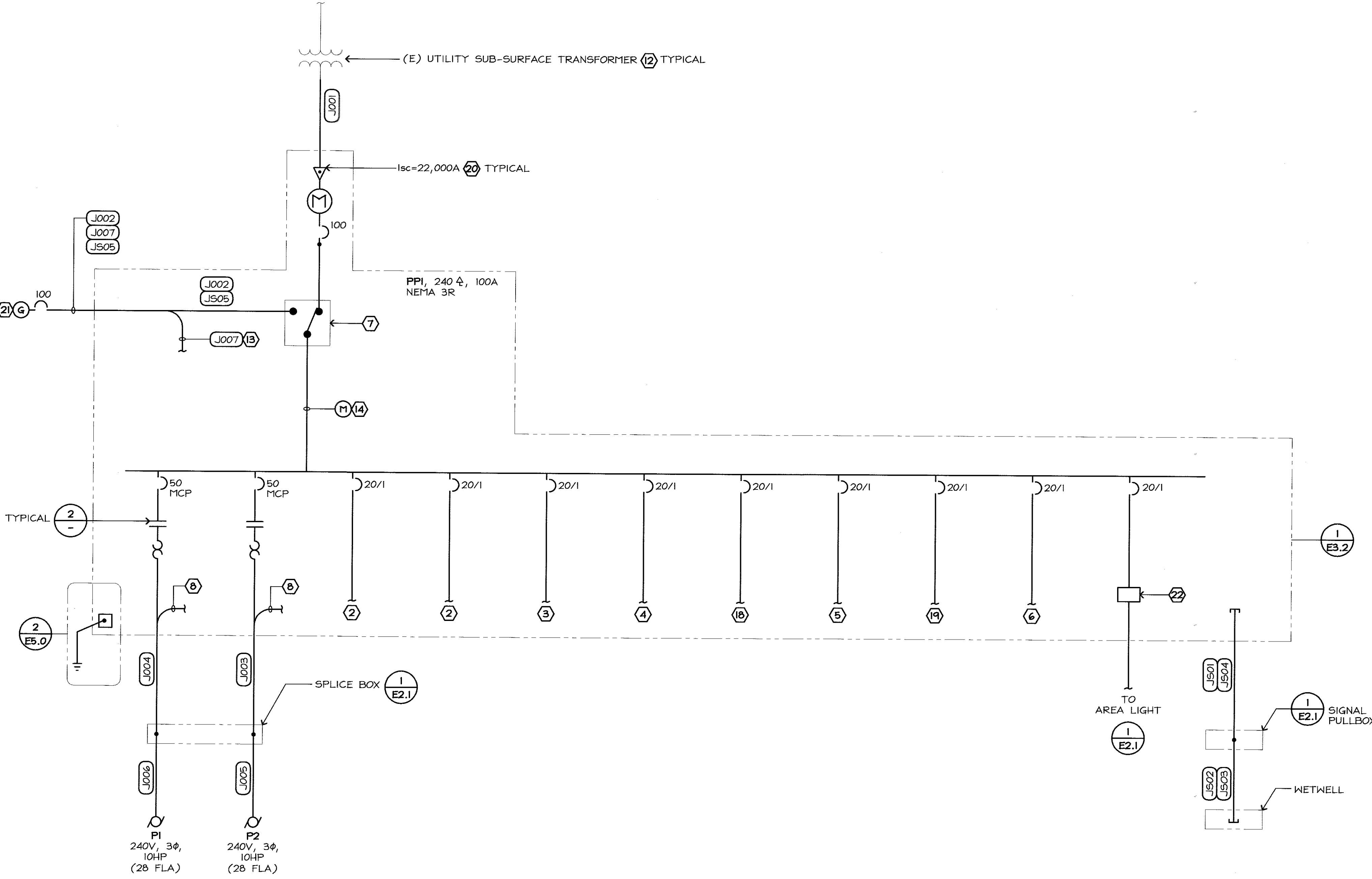
- A. ALL ELECTRICAL SHOWN IS NEW, U.O.N.
- B. ALL CIRCUIT BREAKERS ARE 3-POLE, U.O.N.
- C. VOLTAGE DESIGNATIONS: (U.O.N.)  
240-1 = 240/120V-1PH-3WIRE  
480-1 = 480V-1PH-2WIRE  
208Y = 208/120V-3PH-4 WIRE  
480Y = 480/277V-3PH-4WIRE  
480Δ = 480V-3PH-3 WIRE
- D. "KA" AT CIRCUIT BREAKERS DENOTES MINIMUM REQUIRED INTERRUPTING CAPACITY IN AMPS (x 1000).
- E. SPO AT BREAKER DENOTES: PROVIDE MOUNTING SPACE & HARDWARE FOR FUTURE 3-POLE BREAKER OF RATINGS INDICATED.
- F.  $I_{sc}$  = AVAILABLE SHORT CIRCUIT (RMS SYM. AMPS) BASED ON 500MVA SHORT-CIRCUIT DUTY AT SERVICE XFMR PRIMARY AND 7.5% BELOW NOMINAL XFMR IMPEDANCES; VALUES ON LOAD-SIDE OF MAIN SWITCHBOARD INCLUDE MOTOR CONTRIBUTION.

FEEDER SCHEDULE

FDR No.	CONDUIT AND CONDUCTORS	REMARK
J001	3"C.O.	PG&E SECONDARY
J002	1 1/2"C., 4#2, 1#8 GND.	
J003	1"C., 3#8, 1#10 GND. # 3#14	(15)
J004	1"C., 3#8, 1#10 GND. # 3#14	(15)
J005	1 1/2"C., 3#8, 1#10 GND.	PUMP CABLE (9)
J006	1 1/2"C., 3#8, 1#10 GND.	PUMP CABLE (9)
J007	3/4"C., 4#12, 1#12 GND.	GENERATOR HEATER & BATTERY CHARGER
JS01	1"C.	SIGNAL (10)
JS02	2"C.	SIGNAL (17)
JS03	1"C.	(10)
JS04	3/4"C., 6#14	(16)
JS05	3/4"C., 2#12, 1#12 GND.	GENERATOR START SIGNAL

SHEET NOTES

1. PROVIDE OVERLOAD INDICATING LAMP ADJACENT TO PUMP RUNNING LAMP.
2. 120V CIRCUIT TO CONTROL SECTION.
3. 120V CIRCUIT TO DEGREASER SECTION.
4. PEDESTAL LIGHTS.
5. PEDESTAL HEATERS.
6. PROVIDE 3 SPARE CIRCUIT BREAKERS.
7. AUTOMATIC TRANSFER SWITCH; SEE ELECTRICAL SPECIFICATION.
8. SIGNAL CONDUCTORS TO MINI CAS CONTROLS.
9. PUMP CABLES PROVIDED AS PART OF PUMPS; COORDINATE EXACT LENGTH OF CABLES WITH PUMP VENDOR; CABLES INCLUDE PUMP POWER CONDUCTOR & MINI CAS SIGNAL CONDUCTORS.
10. CONDUIT FOR ULTRASONIC SIGNAL CABLE; ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL CABLES AS REQUIRED FOR SIGNAL CONNECTION.
11. MOMENTARY CONTACT TEST SWITCH.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PG&E FOR ALL UTILITY RELATED WORK PRIOR TO BEGINNING PROJECT INSTALLATION.
13. CIRCUIT TO POWER SOURCE FOR GENERATOR BATTERY CHARGER & BLOCK HEATER.
14. POWER MONITOR PROVIDED WITH CURRENT TRANSFORMERS (CT); MONITORS VOLTAGE & CURRENT LEVELS; PROVIDE SIGNAL TO PLC FOR 30 DAY LOAD PROFILING WITH SCADA ALARM FOR 30 DAY HIGH & LOW KW READING; ELECTRO INDUSTRIES/GAUGE TECH SHARK OR EQUAL; PROVIDE SUBMITTAL.
15. POWER CONDUCTORS & MINI CAS SIGNAL CONDUCTORS.
16. CONDUIT & CONDUCTOR FOR FLOAT SWITCH SIGNAL CONNECTION; SPLICE CONDUCTORS IN PULLBOX; SEE DETAIL 1/E2.1.
17. CONDUIT FOR FLOAT SWITCH CABLES; ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL CABLES AS REQUIRED FOR SIGNAL CONNECTION.
18. GENERATOR BLOCK HEATER.
19. GENERATOR BATTERY CHARGER.
20. RATE PEDESTAL ELEMENTS TO WITHSTAND FAULT CURRENT NOTED.
21. STANDBY EMERGENCY GENERATOR 40KW; 120/240V, 3Φ, 4-WIRE; SEE ELECTRICAL SPECIFICATION.
22. AREA LIGHTING CONTROLS; DETAIL 1/E3.2.



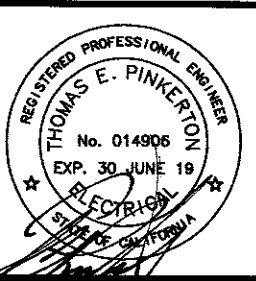
1 LIFT STATION J SINGLE LINE DIAGRAM  
NO SCALE

2 MOTOR STARTER DIAGRAM  
NO SCALE

NO.	DESCRIPTION	DATE	BY	REVISIONS
1	AS-BUILT CORRECTIONS			
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**LIFT STATION J**  
SINGLE LINE DIAGRAM  
SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION

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FE JOB No. 17055.00

FILE NUMBER:  
PRINT DATE:  
2/16/2018  
SHEET NUMBER: E3.0  
19 of 25

GENERAL SINGLE LINE NOTES

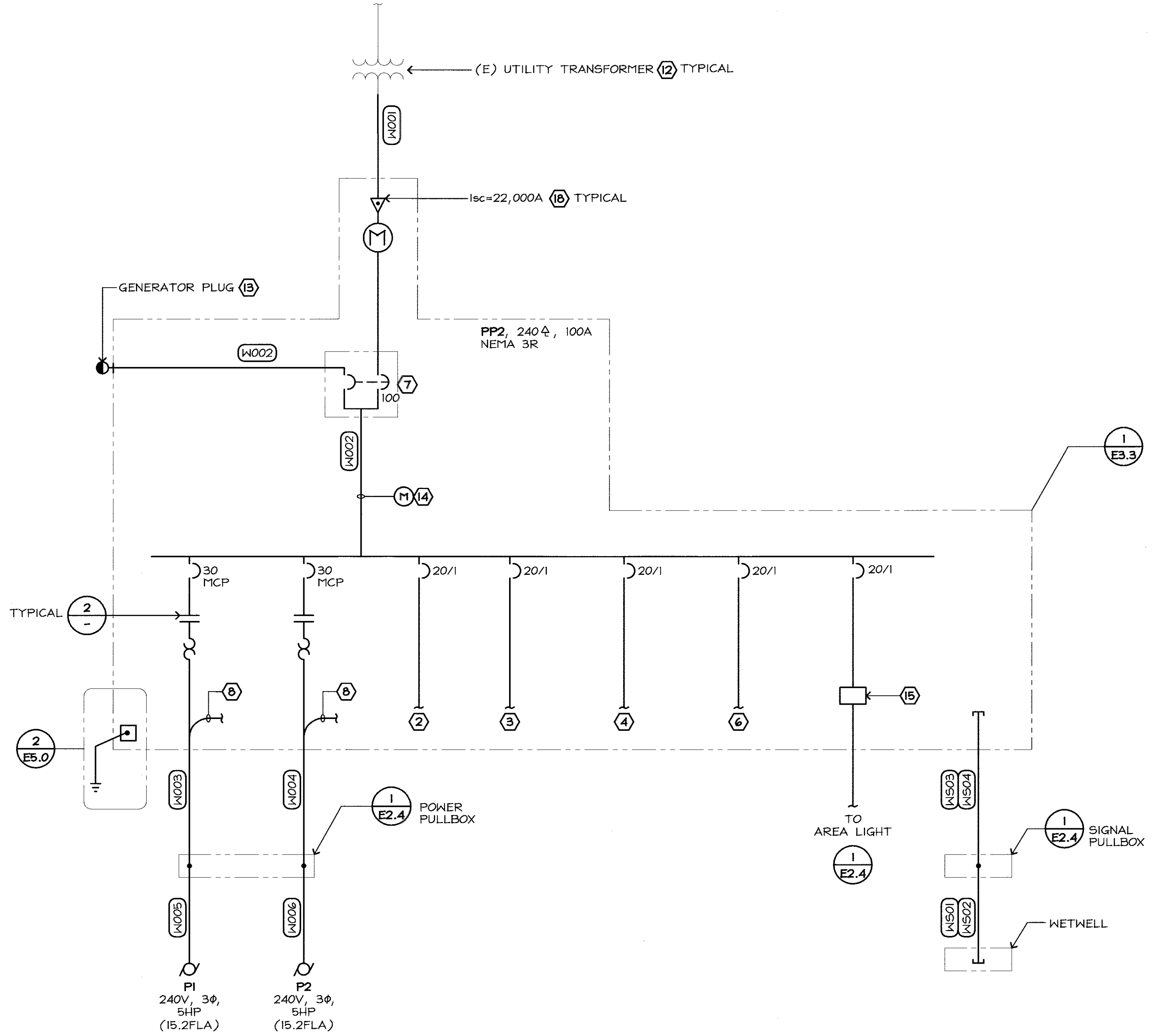
- A. ALL ELECTRICAL SHOWN IS NEW, U.O.N.
- B. ALL CIRCUIT BREAKERS ARE 3-POLE, U.O.N.
- C. VOLTAGE DESIGNATIONS: (U.O.N.)  
240-1 = 240/120V-1PH-3 WIRE  
480-1 = 480V-1PH-2 WIRE  
240 Δ = 240/120V-3PH-4 WIRE  
240 Δ = 240V-3PH-3 WIRE  
208Y = 208/120V-3PH-4 WIRE  
480Y = 480/277V-3PH-4 WIRE  
480 Δ = 480V-3PH-3 WIRE
- D. "KA" AT CIRCUIT BREAKERS DENOTES MINIMUM REQUIRED INTERRUPTING CAPACITY IN AMPS (x 1000).
- E. SPO AT BREAKER DENOTES: PROVIDE MOUNTING SPACE & HARDWARE FOR FUTURE 3-POLE BREAKER OF RATINGS INDICATED.
- F.  $I_{sc}$  = AVAILABLE SHORT CIRCUIT (RMS SYM. AMPS) BASED ON 500MVA SHORT-CIRCUIT DUTY AT SERVICE XFMR PRIMARY AND 7.5% BELOW NOMINAL XFMR IMPEDANCES; VALUES ON LOAD-SIDE OF MAIN SWITCHBOARD INCLUDE MOTOR CONTRIBUTION.

FEEDER SCHEDULE

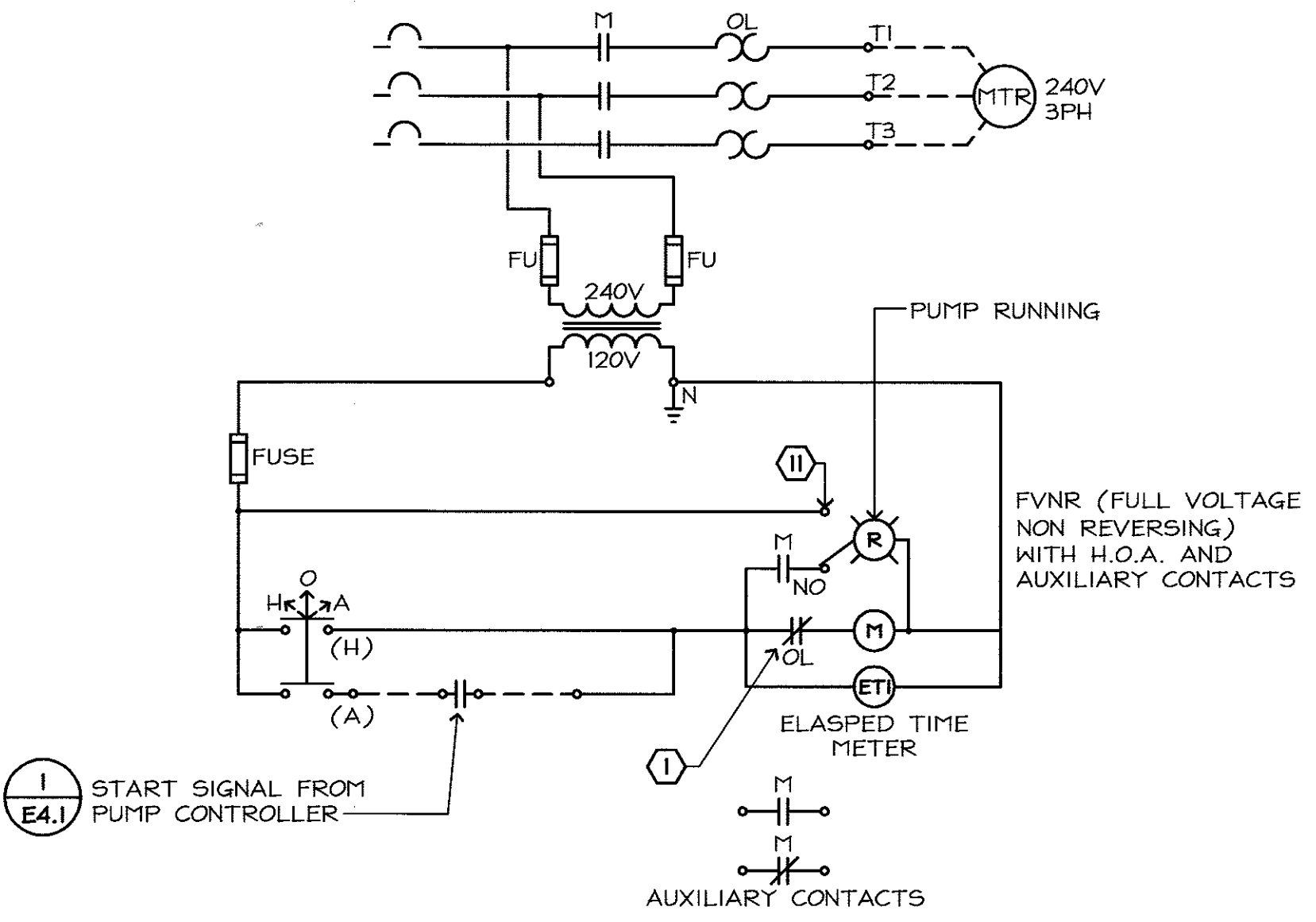
FDR No.	CONDUIT AND CONDUCTORS	REMARK
W001	3" C.O.	PG#E SECONDARY
W002	4#2, 1#8 GND.	
W003	3/4" C., 3#12, 1#12 GND. # 3#14	5
W004	3/4" C., 3#12, 1#12 GND. # 3#14	5
W005	1 1/2" C., 3#12, 1#12 GND.	PUMP CABLE 9
W006	1 1/2" C., 3#12, 1#12 GND.	PUMP CABLE 9
WS01	2" C.	SIGNAL 10
WS02	1" C.	SIGNAL 16
WS03	1" C.	SIGNAL 16
WS04	3/4" C., 6#14	SIGNAL 17

SHEET NOTES

1. PROVIDE OVERLOAD INDICATING LAMP ADJACENT TO PUMP RUNNING LAMP.
2. 120V CIRCUIT TO CONTROL SECTION.
3. 120V CIRCUIT TO DEGREASER SECTION.
4. PEDESTAL LIGHTS AND HEATERS.
5. POWER CONDUCTORS & MINI CAS SIGNAL CONDUCTORS.
6. PROVIDE 3 SPARE CIRCUIT BREAKERS; SIZE AS INDICATED.
7. MANUAL TRANSFER SWITCH; INTERLOCKED CIRCUIT BREAKERS; ONLY ONE CIRCUIT BREAKER CLOSED SIMULTANEOUSLY.
8. SIGNAL CONDUCTORS TO MINI CAS CONTROLS.
9. PUMP CABLES PROVIDED AS PART OF PUMPS; COORDINATE EXACT LENGTH OF CABLES WITH PUMP VENDOR; CABLES INCLUDE PUMP POWER CONDUCTOR & MINI CAS SIGNAL CONDUCTORS.
10. CONDUIT FOR FLOAT SWITCH CABLES; ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL CABLES AS REQUIRED FOR SIGNAL CONNECTION.
11. MOMENTARY CONTACT TEST SWITCH.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PG#E FOR ALL UTILITY RELATED WORK PRIOR TO BEGINNING PROJECT INSTALLATION.
13. GENERATOR PLUG MOUNTED TO PEDESTAL ENCLOSURE; PROVIDE WITH ANGLE ADAPTER 240V, 3Ø, 4 WIRE; RUSSELLSTOLL MAXGARD (PART NUMBER DS2407 MR000); PROVIDE MATERIAL SUBMITTAL FOR CITY APPROVAL PRIOR TO PURCHASE.
14. POWER MONITOR PROVIDED WITH CURRENT TRANSFORMERS (CT); MONITORS VOLTAGE & CURRENT LEVELS; PROVIDE SIGNAL TO PLC FOR 30 DAY LOAD PROFILING WITH SCADA ALARM FOR 30 DAY HIGH & LOW KW READING; ELECTRO INDUSTRIES/GAUGE TECH SHARK OR EQUAL; PROVIDE SUBMITTAL.
15. AREA LIGHTING CONTROLS; DETAIL 1/E3.3.
16. CONDUIT FOR ULTRASONIC SIGNAL CABLE; ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL CABLES AS REQUIRED FOR SIGNAL CONNECTION.
17. CONDUIT & CONDUCTOR FOR FLOAT SWITCH SIGNAL CONNECTION; SPLICE CONDUCTORS IN PULLBOX; SEE DETAIL 1/E2.4.
18. RATE PEDESTAL ELEMENTS TO WITHSTAND FAULT CURRENT NOTED.



1 LIFT STATION W SINGLE LINE DIAGRAM  
NO SCALE



2 MOTOR STARTER DIAGRAM  
NO SCALE

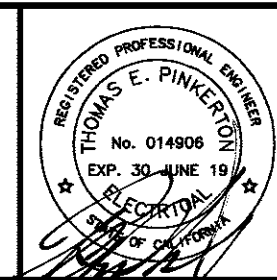
NO.	DESCRIPTION	DATE	BY
1	AS-BUILT CORRECTIONS		
2	REVISIONS		

WORK ACCEPTED:	INSPECTOR:	DRAWN: C.L.	DESIGN: T.P.	HOR: AS SHOWN
CHECKED:		APPROVED: <i>[Signature]</i>	DATE: 2/16/10	VERT: AS SHOWN
CITY ENGINEER:		SCOTT CREER		JOB NUMBER: MHIL.21.15



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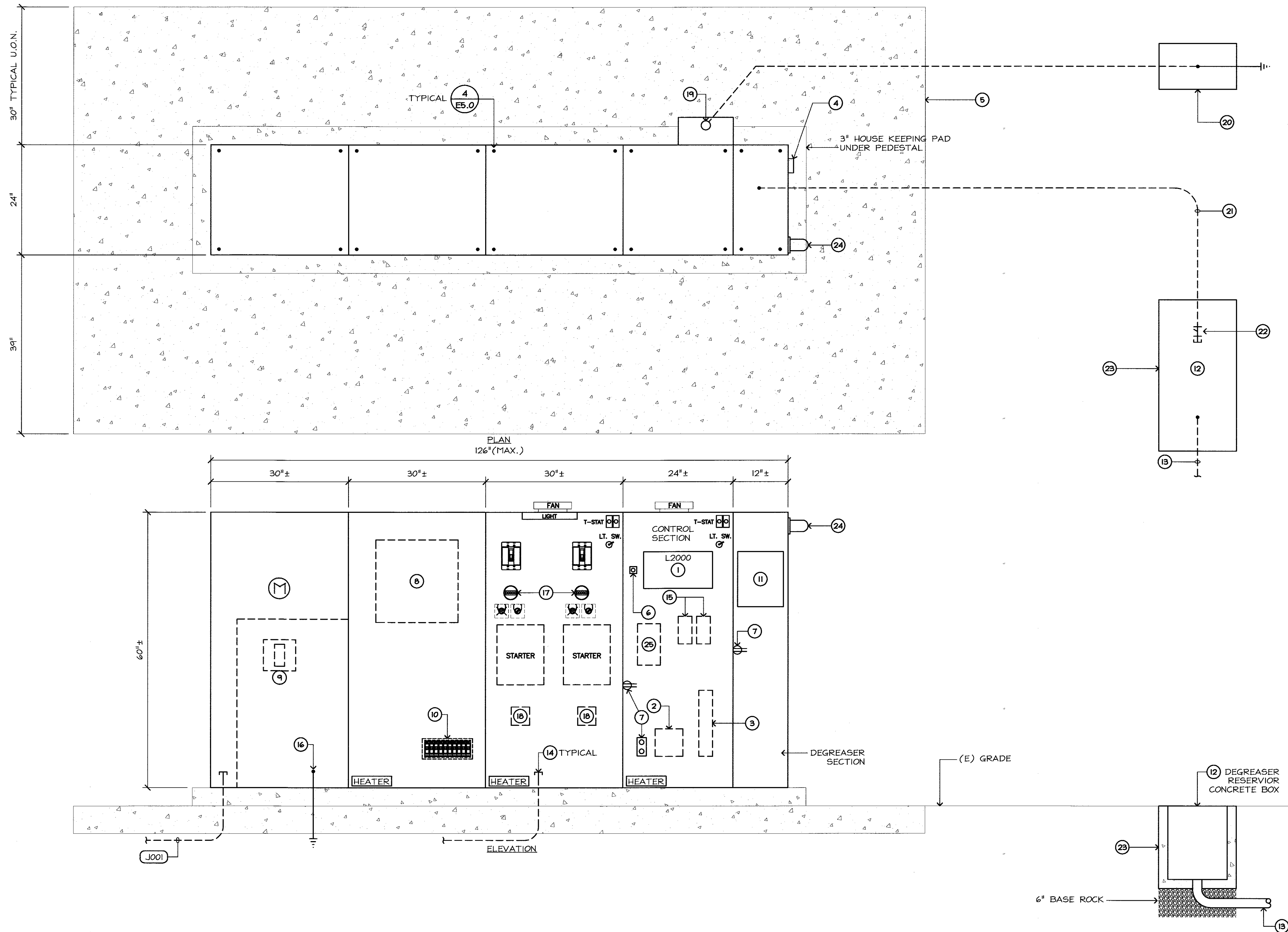


**LIFT STATION W  
SINGLE LINE DIAGRAM  
SANITARY SEWER LIFT STATIONS  
J & W REHABILITATION**

FILE NUMBER:  
PRINT DATE:  
2/16/2018  
SHEET NUMBER: **E3.1**  
**20 of 25**

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CONSULTING ELECTRICAL ENGINEERS  
FE JOB No. 17055.00

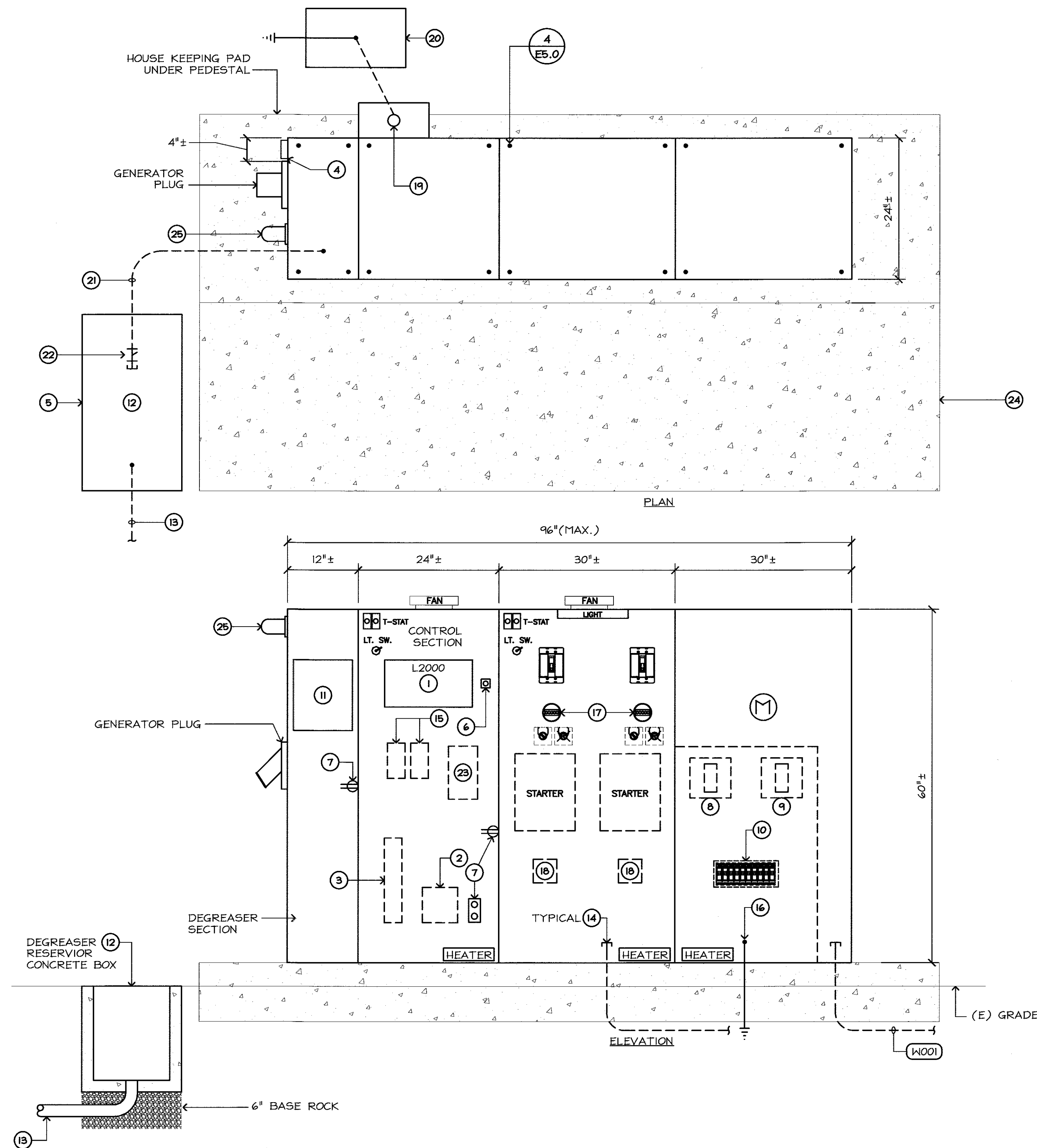




- DETAIL NOTES:**
- CONTROL PLC; TESCO; MOUNTED IN COMPARTMENT INNER DOOR.
  - SCADA RADIO GENERAL ELECTRIC MODEL MDS-SDA; PROVIDE SUBMITTAL INCLUDING COMPLETE WIRING DIAGRAM PRIOR TO PURCHASE.
  - CONTROL SYSTEM UPS; 120V; WITH CAPACITY TO OPERATE CONTROLS AND COMMUNICATIONS SYSTEMS FOR 2 HOURS AT FULL LOAD.
  - SIGNAL HORN GENERAL ALARM SUSTAINED TONE; 100dba AT 10'; 120V; MOUNTED TO PEDESTAL; 200' RANGE; FEDERAL SIGNAL CORP., VIBRATONE MODEL 350 OR EQUAL.
  - CONCRETE EQUIPMENT PAD PROVIDED UNDER CIVIL PLANS; APPROXIMATE LAYOUT SHOWN; COORDINATE WITH CIVIL PLANS FOR EXACT PAD SIZE; PAD SIZE SHALL BE BASED UPON POWER PEDESTAL DIMENSIONS.
  - ALARM ACKNOWLEDGE MOMENTARY CONTACT PUSHBUTTON; MOUNTED IN COMPARTMENT INNER DOOR.
  - COMPARTMENT CONVENIENCE RECEPTACLE.
  - AUTOMATIC TRANSFER SWITCH DESIGNED TO TRANSFER LOADS FROM ONE POWER SUPPLY TO ANOTHER; 240V, 100A, 3Ø RATED; INSTALLED IN PEDESTAL ENCLOSURE.
  - MAIN CIRCUIT BREAKER.
  - STATION CIRCUIT BREAKERS; SEE SINGLE LINE DIAGRAM.
  - DEGREASER PUMP; "WATCH DOG II" DISPENSER BY ZEP EQUIPMENT; NO SUBSTITUTE PROVIDE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASE; COORDINATE WITH CITY TO SET PUMP TIMES AND RUN DURATION.
  - DEGREASER RESERVOIR; CONCRETE PULLBOX 17" X 30" ID; 18" DEEP.
  - 2" CONDUIT FOR DEGREASER INJECTION TUBE; SEE STATION PLAN; LOCATE CONDUIT AT LOWEST POINT IN BOX TO AID IN DRAINAGE.
  - PROVIDE EYS SEALS FOR ALL CONDUITS INTO THE PEDESTAL FROM THE WET WELL; SEE PLANS FOR EXACT CONDUIT COUNTS & REQUIREMENTS.
  - MINI CAS MOISTURE & TEMPERATURE CONTROLS.
  - SERVICE GROUND; DRIVEN GROUND ROD; 9/8" EARTH TO ROD CONTACT; 6" ABOVE FINISHED CONCRETE; AWG#6 GROUND ROD BONDED TO CONCRETE REBAR.
  - INDICATING LIGHT & INSTRUMENTATION FOR MOTOR STARTER; SEE DETAIL 1/E4.0.
  - FLOAT SWITCH INTRINSICALLY SAFE RELAY.
  - ANTENNA MAST MOUNTED TO REAR OF CONTROL SECTION; SEE DETAIL 3/E5.0.
  - ANTENNA GROUND; 3/4" DIAMETER COPPER GROUND ROD WITH 72" MINIMUM EARTH CONTACT; PROVIDE ACCESS TO GROUND ROD VIA 17"x10" ID CONCRETE BOX CHRISTY N4; SEE DETAIL 3/E5.0; BOND ANTENNA GROUND TO SYSTEM GROUND VIA 1#6 B.C. CONDUCTOR.
  - 2" CONDUIT FOR DEGREASER SUCTION AND INJECTION TUBES.
  - EYS SEAL.
  - SEE PLANS FOR EXACT BOX LOCATION; COORDINATE WITH CIVIL PLANS.
  - HIGH WATER SIGNAL LIGHT; RED FLASHING (90± FLASHES PER MINUTE) LED; 120V; DAYLIGHT VISIBLE FROM 100' MINIMUM; (AS VIEWED FROM THE SIDE OF THE LIGHT); SEE 1/E4.0 FOR CONTROLS.
  - LIGHT CONTROLS FOR AREA LIGHT; ASTRONOMIC TIME SWITCH; WITH 24 DAY HOLIDAY SCHEDULE; MANUAL OVERRIDE; DUAL CHANNELS; PANEL MOUNTED FLUSH; TORK DZS SERIES OR APPROVED EQUAL.

# **LIFT STATION J POWER PEDESTAL** NO SCALE

				WORK ACCEPTED:	INSPECTOR:	DRAWN:	DESIGN:	HOR:
						C.L.	T.P.	AS SHOWN
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						<i>by [signature]</i>		AS SHOWN
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						<i>[signature]</i>	2/14/10	MHIL.21.15
PATH				REVISIONS		CITY/STATE: SCOTT CREER		



# DETAIL NOTES:

- CONTROL PLC; TESCO; MOUNTED IN COMPARTMENT INNER DOOR.
- MOUNTING SPACE FOR CITY PROVIDED & INSTALLED SCADA RADIO MDS 4710; COORDINATE REQUIREMENTS WITH THE CITY.
- CONTROL SYSTEM UPS; 120V; WITH CAPACITY TO OPERATE CONTROLS AND COMMUNICATIONS SYSTEMS FOR 2 HOURS AT FULL LOAD.
- SIGNAL HORN GENERAL ALARM SUSTAINED TONE; 100dba AT 10'; 120V; MOUNTED TO PEDESTAL; 200' RANGE; FEDERAL SIGNAL CORP., VIBRATONE MODEL 350 OR EQUAL.
- SEE PLANS FOR EXACT BOX LOCATION; COORDINATE WITH CIVIL PLANS.
- ALARM ACKNOWLEDGE MOMENTARY CONTACT PUSHBUTTON; MOUNTED IN COMPARTMENT INNER DOOR.
- COMPARTMENT CONVENIENCE RECEPTACLE.
- MANUAL TRANSFER SWITCH DESIGNED TO MANUALLY TRANSFER LOADS FROM ONE POWER SUPPLY TO ANOTHER; 240V, 100A, 3Φ RATED; INSTALLED IN PEDESTAL ENCLOSURE; PROVIDE INTERLOCKING CIRCUIT BREAKERS.
- MAIN CIRCUIT BREAKER.
- STATION CIRCUIT BREAKERS; SEE SINGLE LINE DIAGRAM.
- DEGREASER PUMP; "WATCH DOG II" DISPENSER BY ZEP EQUIPMENT; NO SUBSTITUTE PROVIDE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASE; COORDINATE WITH CITY TO SET PUMP TIMES AND RUN DURATION.
- DEGREASER RESERVOIR; CONCRETE PULLBOX 17" X 30" ID; 18" DEEP.
- 2" CONDUIT FOR DEGREASER INJECTION TUBE; SEE STATION PLAN; LOCATE CONDUIT AT LOWEST POINT IN BOX TO AID IN DRAINAGE.
- CONDUITS INTO THE PEDESTAL FROM THE WET WELL; SEE PLANS FOR EXACT CONDUIT COUNTS & REQUIREMENTS.
- MINI CAS MOISTURE & TEMPERATURE CONTROLS.
- SERVICE GROUND; DRIVEN GROUND ROD; 96" EARTH TO ROD CONTACT; 6" ABOVE FINISHED CONCRETE; AWG#6 GROUND ROD BONDED TO CONCRETE REBAR.
- INDICATING LIGHT & INSTRUMENTATION FOR MOTOR STARTER; SEE MOTOR STARTER DIAGRAM.
- FLOAT SWITCH INTRINSICALLY SAFE RELAY.
- ANTENNA MAST MOUNTED TO REAR OF CONTROL SECTION; SEE DETAIL 3/E5.0.
- ANTENNA GROUND; 3/4" DIAMETER COPPER GROUND ROD WITH 72" MINIMUM EARTH CONTACT; PROVIDE ACCESS TO GROUND ROD VIA 17"X10" ID CONCRETE BOX CHRISTY N9; SEE DETAIL 3/E5.0; BOND ANTENNA GROUND TO SYSTEM GROUND VIA 1#6 B.C. CONDUCTOR.
- 2" CONDUIT FOR DEGREASER INJECTION TUBE.
- EYS SEAL.
- LIGHT CONTROLS FOR AREA LIGHT; ASTRONOMIC TIME SWITCH; WITH 24 DAY HOLIDAY SCHEDULE; MANUAL OVERRIDE; DUAL CHANNELS; PANEL MOUNTED FLUSH; TORK DZS SERIES OR APPROVED EQUAL.
- CONCRETE EQUIPMENT PAD PROVIDED UNDER CIVIL PLANS; APPROXIMATE LAYOUT SHOWN; COORDINATE WITH CIVIL PLANS FOR EXACT PAD SIZE; PAD SIZE SHALL BE BASED UPON POWER PEDESTAL DIMENSIONS.
- HIGH WATER SIGNAL LIGHT; RED FLASHING (90± FLASHES PER MINUTE) LED; 120V; DAYLIGHT VISIBLE FROM 100' MINIMUM; (AS VIEWED FROM THE SIDE OF THE LIGHT); SEE 1/E4.1 FOR CONTROLS.

## 1 LIFT STATION W POWER PEDESTAL NO SCALE

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FAX: (831) 786-8523  
EMAIL: tpinkerton@fehrengineering.com  
CONSULTING ELECTRICAL ENGINEERS  
FE JOB No. 17055.00

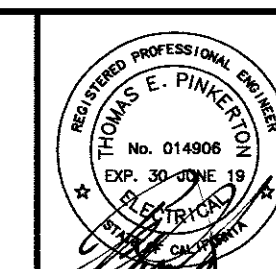
NO.	DESCRIPTION	DATE	BY	DATE
1	AS-BUILT CORRECTIONS			
2	REVISIONS			

WORK ACCEPTED:	INSPECTOR:	DRAWN:	DESIGN:	HOR:
		C.L.	T.P.	AS SHOWN
CHECKED:				VERT:
				AS SHOWN
APPROVED:				JOB NUMBER:
				MHIL.21.15
CITY ENGINEER	SCOTT CREER			



**City of Morgan Hill**  
Public Works Department  
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(408) 246-4848

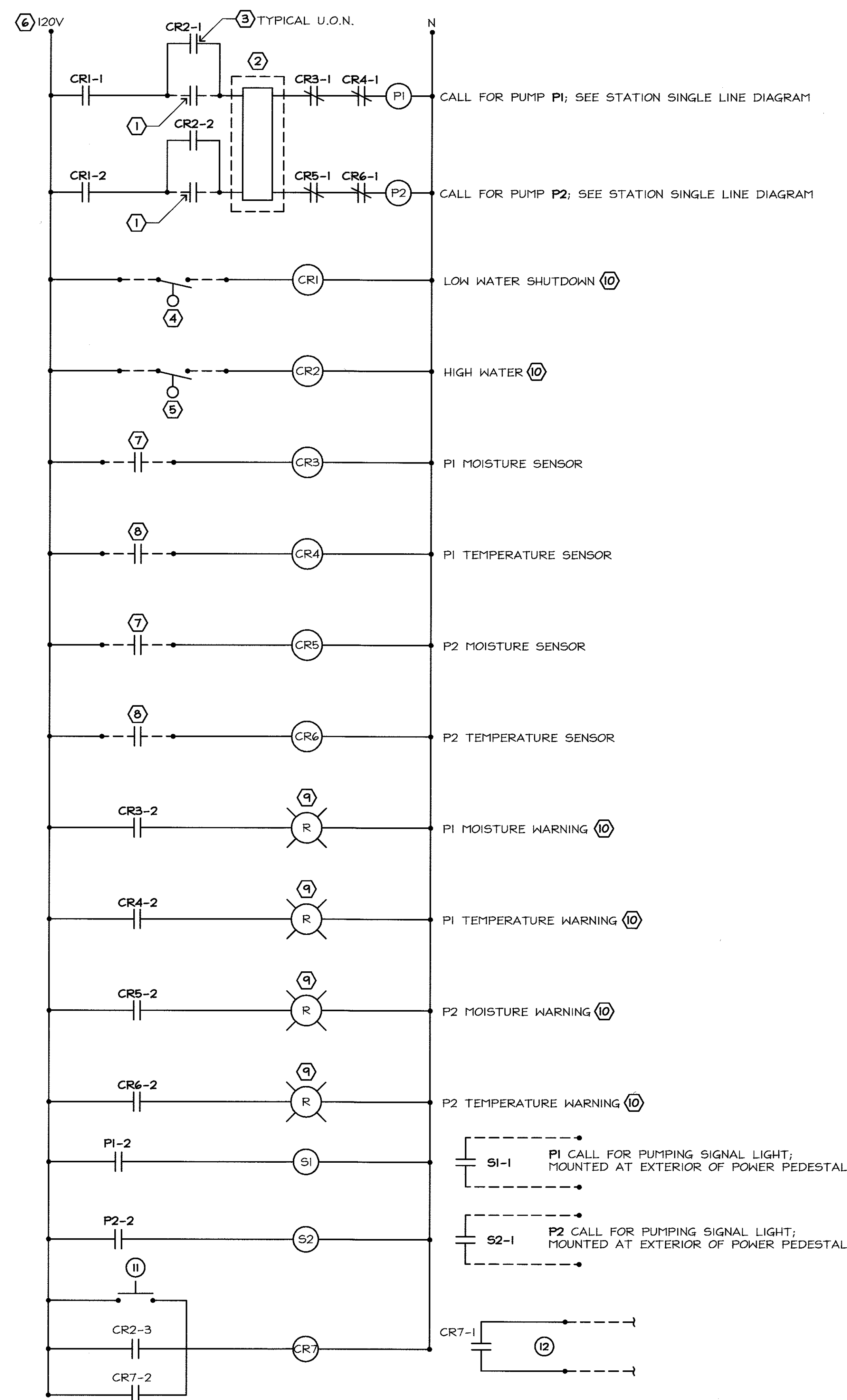


**LIFT STATION W  
POWER PEDESTAL**  
**SANITARY SEWER LIFT STATIONS**  
**J & W REHABILITATION**

FILE NUMBER:  
-  
PRINT DATE:  
2/16/2018  
SHEET NUMBER: **E3.3**  
**22 of 25**

# SHEET NOTES

- FROM N.O. CONTACTS OF ULTRASONIC LEVEL CONTROL; CONTACT CLOSING UPON REACHING PUMPING LEVEL & REMAINS CLOSED UNTIL REACHING STOP LEVEL; SEE CIVIL PLANS FOR PUMPING LEVELS.
- PUMP ALTERNATOR; ROTATES START SEQUENCE OF PUMPS; (LEAD PUMP, LAG PUMP); PROVIDE TIME DELAY OF 60 SECONDS BETWEEN INDIVIDUAL PUMP STARTS.
- CONTROL RELAY; DPDT, 8 PIN RELAY; 10 AMP CONTACTS.
- FS1; LOW WATER FLOAT SWITCH; STOPS ALL PUMPING AT LOW WATER LEVEL.
- FS2; HIGH WATER FLOAT SWITCH; CALLS FOR ALL PUMPS TO START UPON HIGH WATER CONDITION.
- CONTROL POWER PROVIDED FROM PEDESTAL CIRCUITS VIA UPS; SEE SINGLE LINE DIAGRAM.
- MOISTURE SENSOR RELAY FROM MINI GAS SYSTEM; PROVIDED AS PART OF PUMPS WITH CONTROLLER INSTALLED IN POWER PEDESTAL CONTROL SECTION BY ELECTRICAL CONTRACTOR.
- TEMPERATURE SENSOR RELAY FROM MINI GAS SYSTEM; PROVIDED AS PART OF PUMPS WITH CONTROLLER INSTALLED IN POWER PEDESTAL CONTROL SECTION BY ELECTRICAL CONTRACTOR.
- 1"± DIAMETER RED LENS INDICATING LAMP; MOUNTED TO EXTERIOR DOOR OF POWER PEDESTAL CONTROL SECTION; LABEL AS INDICATED ON CONTROL DIAGRAM.
- SENDS SCADA SIGNAL/ALARM.
- PEDESTAL MOUNTED MOMENTARY CONTACT LAMP TEST PUSH BUTTON.
- HIGH WATER SIGNAL LIGHT & HORN MOUNTED TO PEDESTAL SEE DETAIL 1/E3.2.



**LIFT STATION J SCHEMATIC PUMP CONTROL DIAGRAM**

NO SCALE

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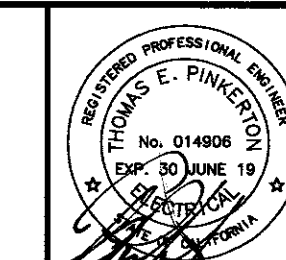
NO.	DESCRIPTION	DATE	BY
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Public Works Department

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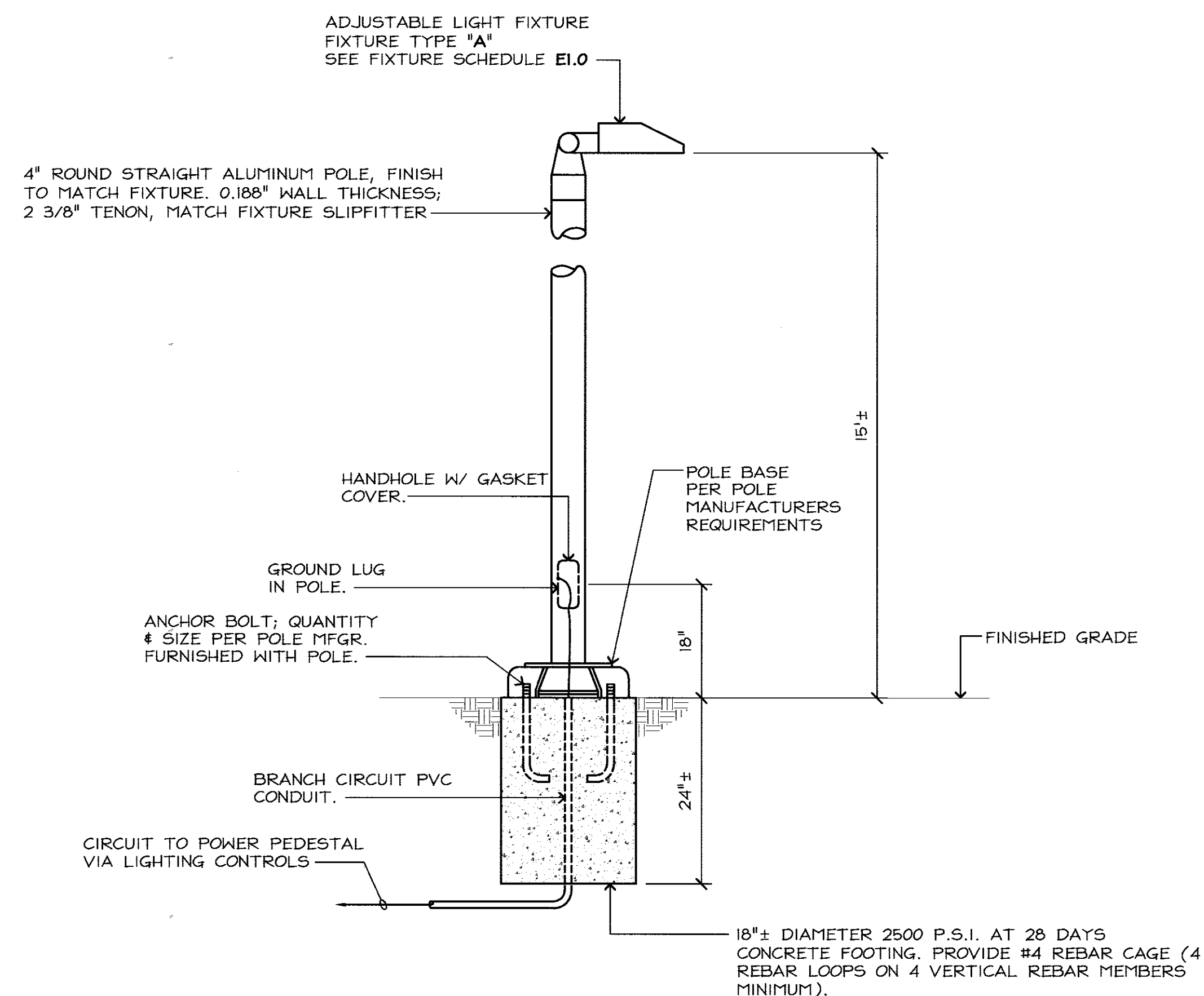
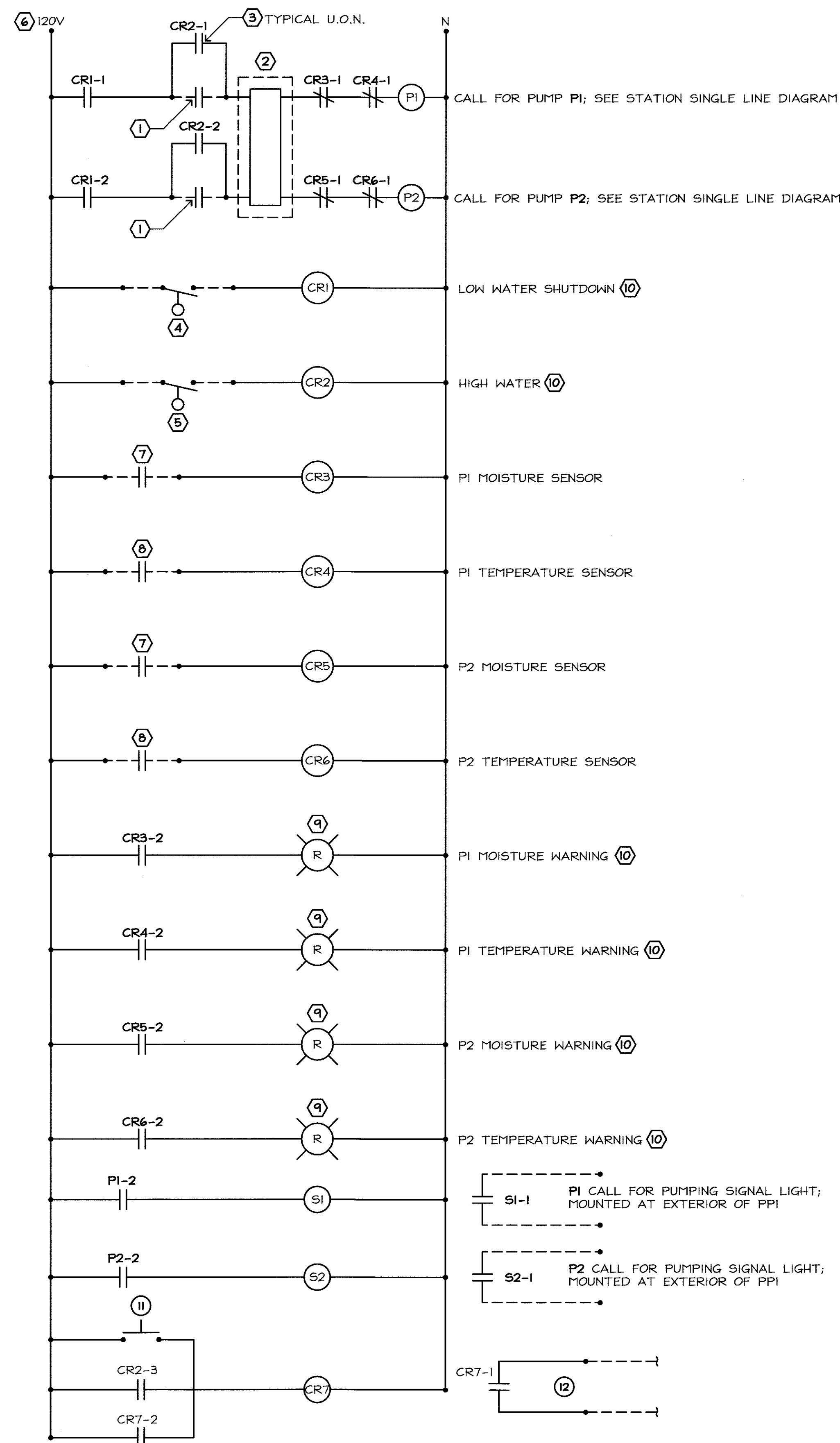
**LIFT STATION J SCHEMATIC PUMP CONTROL DIAGRAM**  
**SANITARY SEWER LIFT STATIONS J & W REHABILITATION**

FILE NUMBER:  
PRINT DATE:  
2/16/2018  
SHEET NUMBER: **E4.0**  
**23 of 25**



## SHEET NOTES

- FROM N.O. CONTACTS OF ULTRASONIC LEVEL CONTROL; CONTACT CLOSURES UPON REACHING PUMPING LEVEL & REMAINS CLOSED UNTIL REACHING STOP LEVEL; SEE CIVIL PLANS FOR PUMPING LEVELS.
- PUMP ALTERNATOR; ROTATES START SEQUENCE OF PUMPS; (LEAD PUMP, LAG PUMP); PROVIDE TIME DELAY OF 60 SECONDS BETWEEN INDIVIDUAL PUMP STARTS.
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- CONTROL POWER PROVIDED FROM PEDESTAL CIRCUITS; SEE SINGLE LINE DIAGRAM.
- MOISTURE SENSOR RELAY FROM MINI CAS SYSTEM; PROVIDED AS PART OF PUMPS WITH CONTROLLER INSTALLED IN PPI CONTROL SECTION BY ELECTRICAL CONTRACTOR; SEE DETAIL 1/E3.3 & 1/E3.4.
- TEMPERATURE SENSOR RELAY FROM MINI CAS SYSTEM; PROVIDED AS PART OF PUMPS WITH CONTROLLER INSTALLED IN POWER PEDESTAL CONTROL SECTION BY ELECTRICAL CONTRACTOR.
- 1"± DIAMETER RED LENS INDICATING LAMP; MOUNTED TO EXTERIOR DOOR OF PPI CONTROL SECTION; LABEL AS INDICATED ON CONTROL DIAGRAM.
- SENDS SCADA SIGNAL/ALARM.
- PEDESTAL MOUNTED MOMENTARY CONTACT LAMP TEST PUSH BUTTON.
- HIGH WATER SIGNAL LIGHT & HORN MOUNTED TO PEDESTAL SEE DETAIL 1/E3.3.



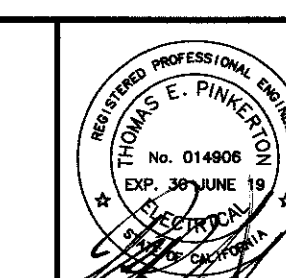
**1 LIFT STATION W SCHEMATIC PUMP CONTROL DIAGRAM**  
 NO SCALE

**2 FIXTURE A MOUNTING**  
 NO SCALE

NO.	DESCRIPTION	DATE	BY	DATE
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**LIFT STATION W SCHEMATIC PUMP CONTROL DIAGRAM**  
**SANITARY SEWER LIFT STATIONS J & W REHABILITATION**

FILE NUMBER:  
 PRINT DATE:  
 SHEET NUMBER: **E4.1**  
**24 of 25**

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FILE NUMBER:  
-  
PRINT DATE:  
2/16/2018  
SHEET NUMBER: E5.0  
**25 OF 25**